

TOSHIBA

FILE NO. 030-9515

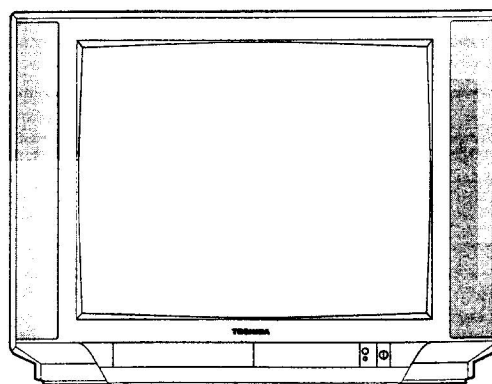
SERVICE MANUAL

COLOUR TELEVISION

C5SS Chassis

2857DB

3 3 5 7 D B



SAFETY INSTRUCTIONS

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" INSTRUCTIONS BELOW.

X-RAY RADIATION PRECAUTION

1. The E.H.T. must be checked every time the receiver is serviced to ensure that the C.R.T. does not emit X-ray radiation as result of excessive E.H.T. voltage. The nominal E.H.T. for this receiver is 31.5 kV at zero beam current (minimum brightness) operating at 240V a.c. The maximum E.H.T. voltage permissible in any operating circumstances must not exceed 32.0 kV. When checking the E.H.T., use the 'High Voltage Check' procedure in this manual using an accurate E.H.T. voltmeter.
2. The only source of X-RAY radiation in this receiver is the C.R.T. To prevent X-ray radiation, the replacement C.R.T. must be identical to the original fitted as specified in the Parts List.
3. Some components used in this receiver have safety related characteristics preventing the C.R.T. from emitting X-ray radiation.
For continued safety, replacement component should only be made after referring the Product Safety Notice below.

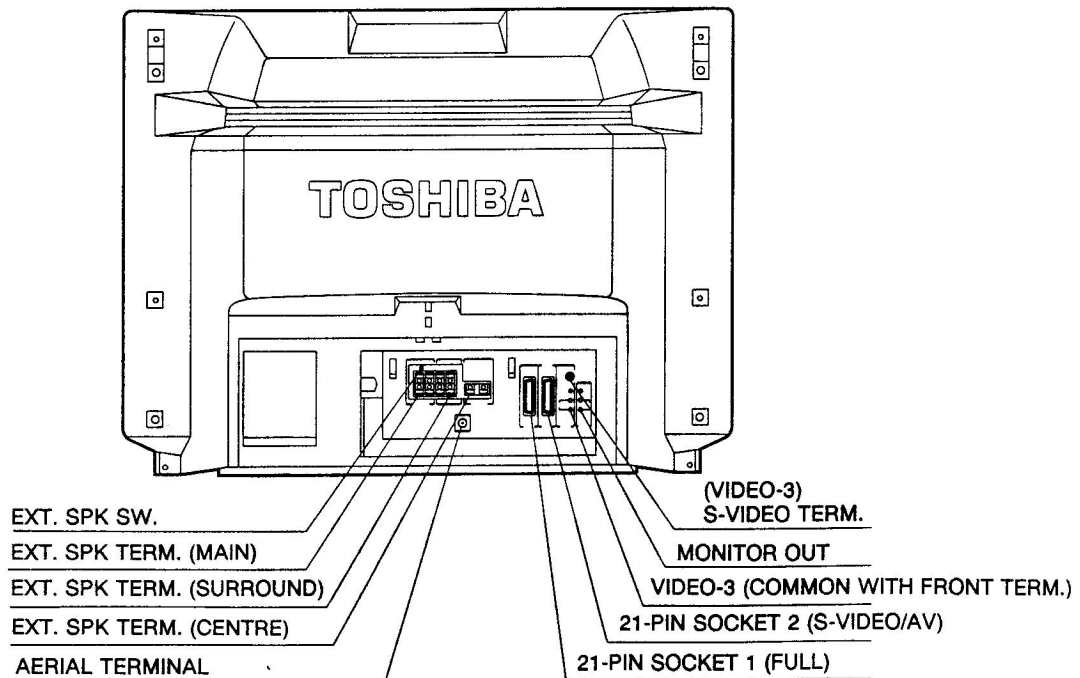
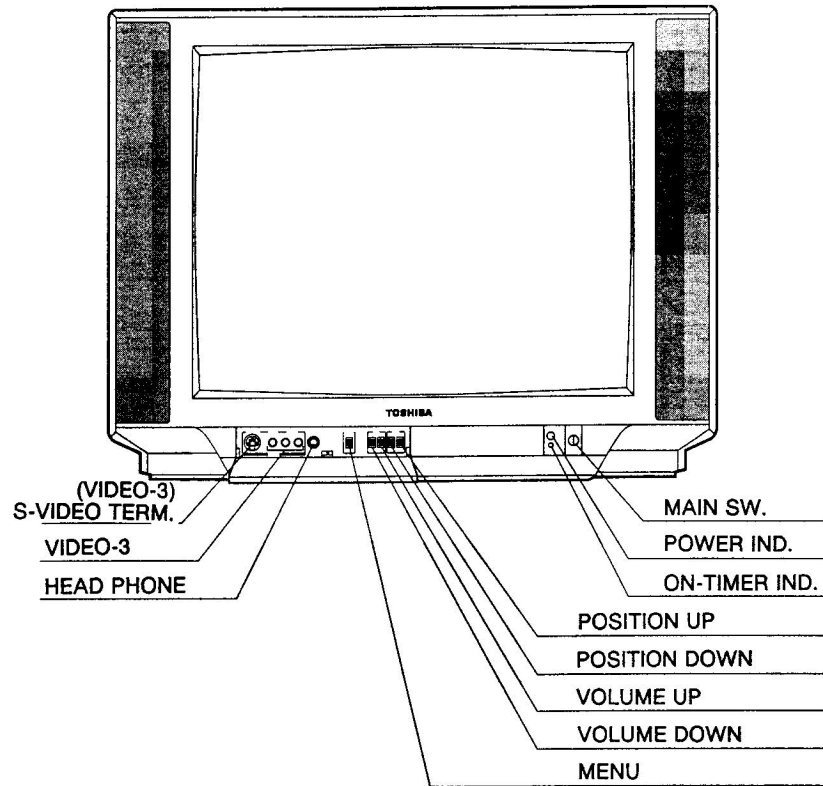
SAFETY PRECAUTION

1. This receiver has a nominal working E.H.T. voltage of 28.5 kV. Extreme caution should be exercised when working on the receiver with the back removed.
Do not attempt to service this receiver if you are not conversant with the precautions and procedures for working on high voltage equipment.
When handling or working on the C.R.T., always discharge the anode to the receiver chassis before removing the anode cap
The C.R.T., if broken, will violently expel glass fragments. Use shatter proof goggles and take extreme care while handling.
Do not hold the C.R.T. by the neck as this is a very dangerous practice.
2. It is essential that to maintain the safety of the customer all cable forms be replaced exactly as supplied from factory.
3. A small part of the chassis used in this receiver is, when operating, at approximately half mains potential at all times. It is therefore essential in the interest of safety that when serving or connecting any test equipment the receiver should be supplied via a suitable isolating transformer of adequate rating.
4. Replace blown fuses within the receiver with the fuse specified in the parts list.
5. When replacing wires or components to terminals or tags, wind the leads around the terminal before soldering. When replacing safety components identified by the international hazard symbols on the circuit diagram and parts list, it must be a Toshiba approved type and must be mounted as the original.
6. Keep wires away from high temperature components.

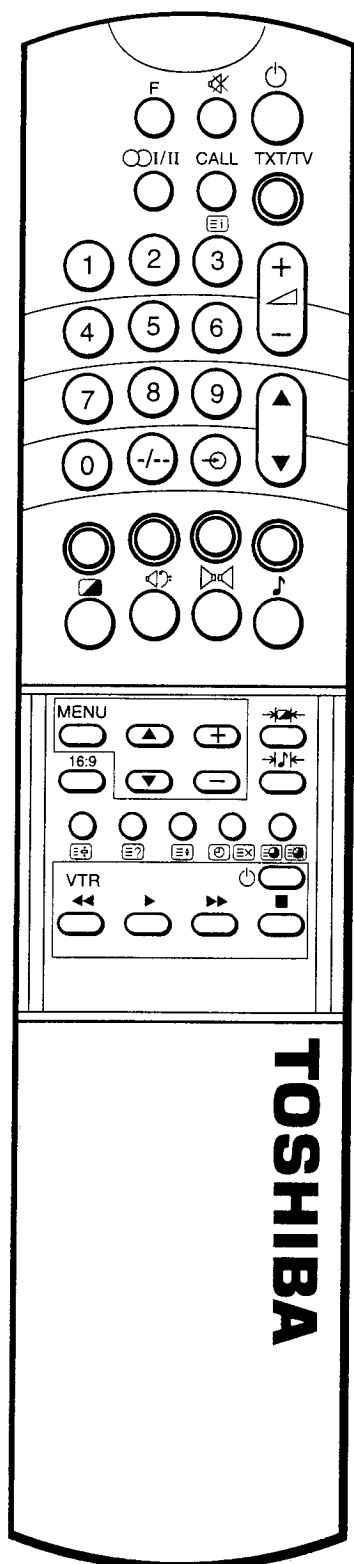
PRODUCT SAFETY NOTICE

Many electrical and mechanical components in this chassis have special safety-related characteristics. These characteristics are often passed unnoticed by a visual inspection and the X-ray radiation protection afforded by them cannot necessarily be obtained by using replacements rated at higher voltages or wattage, etc. Components which have these special safety characteristics in this manual and its supplements are identified by the international hazard symbols on the schematic diagram and parts list. Before replacing any of these components read the parts list in this manual carefully. Substitute replacement components which do not have the same safety characteristics as specified in the parts list may create X-ray radiation.

FRONT CONTROLS AND REAR VIEWS



REMOTE HAND HELD UNIT

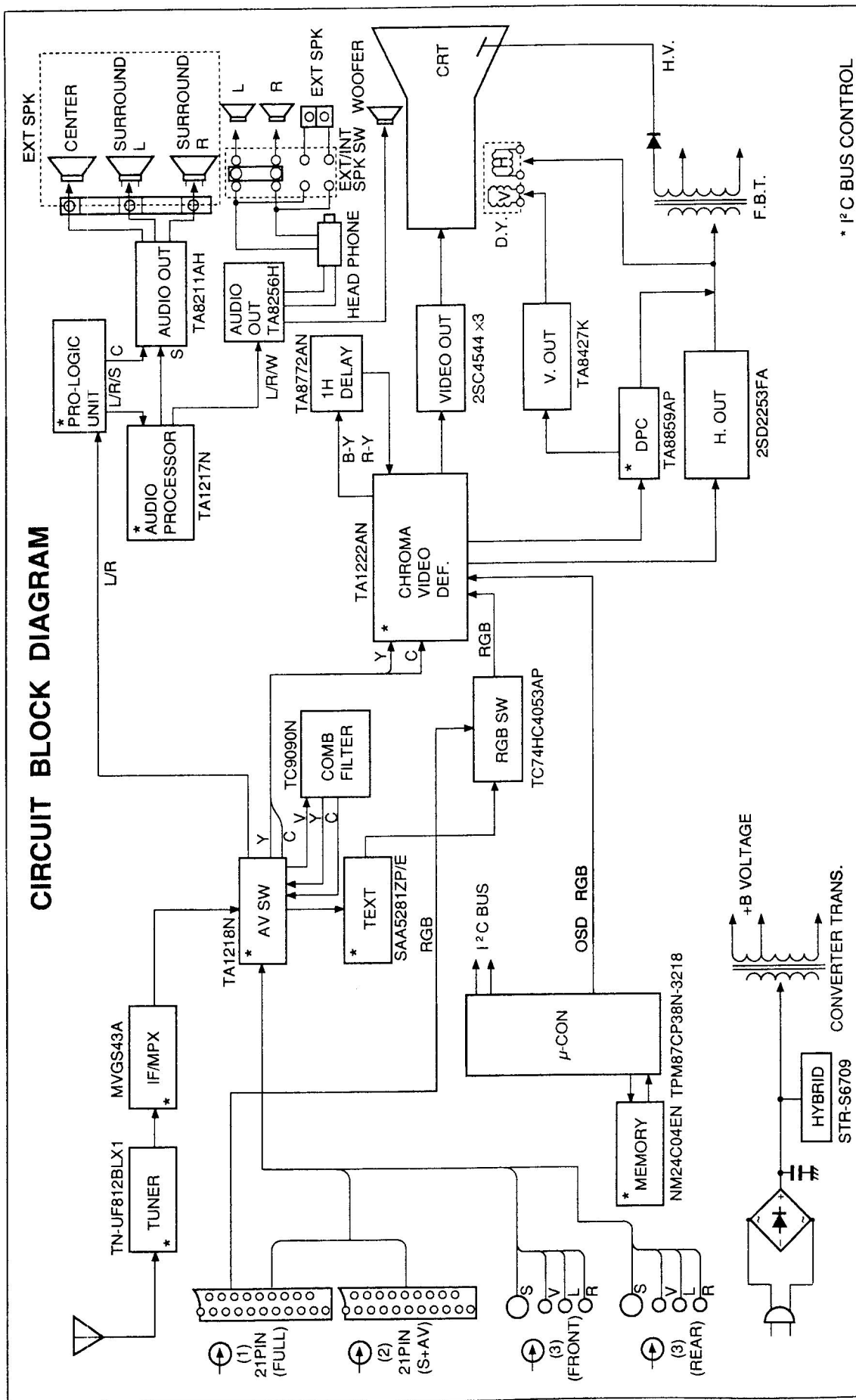


CT-9763

KEY ASSIGNMENT

- ⏻ ON/STAND-BY
- 🔇 Sound mute
- F (Quick/advanced operation)
- CALL (On-screen call)/ (index, initial) TELETEXT MODE
- PICTURE MENU
- SOUND MENU
- <TV MODE> STEREO BILINGUAL
- 1~9, 0 ... TEN KEY
- / - - 1 or 2 place
- VIDEO INPUT (EXTERNAL INPUT SOURCE SW.)
- VOLUME
- + ... LEVEL PLUS (VOLUME, MENU)
- LEVEL MINUS (VOLUME, MENU)
- ▲ UP (POS., CH., TEXT PAGE)
- ▼ DOWN (POS., CH., TEXT PAGE)
- TXT/TV TEXT, MIX, TV MODE SW.
- HOLD
- <TEXT MODE> REVEAL / CONCEAL
- <TEXT MODE> F-T-B (FULL, TOP, BOTTOM)
- TIME DISPLAY (TV MODE)
TEXT CLEAR (TEXT MODE)
- FLOF COLOUR KEY (4 key used)
Red/Green/Yellow/Blue
- Super woofer
- Sound mode select
- Selectable picture
- Selectable sound
- MENU TUNING & OTHER MENU
- / Menu select
- / Level down/up
- 16:9 PIC SIZE (Picture size select)
- VTR control
 - ⏻ Power on/standby
 - ▶ Play
 - Stop
 - ◀ Rewind
 - ▶▶ Fast forward

CIRCUIT BLOCK DIAGRAM



* I²C BUS CONTROL

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

INSTALLATION AND SERVICE ADJUSTMENTS

GENERAL INFORMATIONS

All adjustments are thoroughly checked and corrected when the receiver leaves the factory. Therefore the receiver should operate normally and produce proper colour and B/W pictures upon installation. However, several minor adjustments may be required depending on the particular location in which the receiver is operated.

This receiver is shipped completely in cardboard carton. Carefully draw out the receiver from the carton and remove all packing materials. Plug the power cord into a convenient 240 volts 50 Hz AC two pin power outlet. Turn the receiver ON. Check and adjust all the customer controls such as BRIGHTNESS, CONTRAST and COLOUR Controls to obtain natural colour or B/W picture.

AUTOMATIC DEGAUSSING

A degaussing coil is mounted around the picture tube so that external degaussing after moving the receiver is normally unnecessary, providing the receiver is properly degaussed upon installation. The degaussing coil operates for about 1 second after the power to the receiver is switched ON. If the set is moved or faced in a different direction, the power switch must be switched off at least 30 minutes in order that the automatic degaussing circuit operates properly. Should the chassis or parts of the cabinet become magnetized to cause poor colour purity, use an external degaussing coil. Slowly move the degaussing coil around the faceplate of the picture tube, the sides and front of the receiver and slowly withdraw the coil to a distance of about 2 m before disconnecting it from AC source. If colour shading still persists, perform the COLOUR PURITY ADJUSTMENT and CONVERGENCE ADJUSTMENTS procedures.

HIGH VOLTAGE CHECK

CAUTION: There is no HIGH VOLTAGE ADJUSTMENT on this chassis.

1. Connect an accurate high voltage meter to the second anode of the picture tube.
2. Turn on the receiver. Set the BRIGHTNESS and CONTRAST Controls to minimum (zero beam current).
3. High voltage will be measured below 32.0 kV.
4. Rotate the BRIGHTNESS Control to both extremes to be sure the high voltage does not exceed the limit of 32.0 kV under any conditions.

FOCUS ADJUSTMENT

Adjust FOCUS Control on FLYBACK TRANS. (T461) for well defined scanning lines in the centre area on the screen.,

SET-UP ADJUSTMENT

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

Perform the adjustments in order as follows :

1. Color Purity
2. Convergence
3. White Balance (See page 14.)

Note: The PURITY/CONVERGENCE MAGNET assembly and rubber wedges need mechanical positioning.
Refer to figure 2.

COLOR PURITY ADJUSTMENT

NOTE : Before attempting any purity adjustments, the receiver should be operated for at least fifteen minutes.

1. Demagnetize the picture tube and cabinet using a degaussing coil.
2. Set the brightness and contrast to maximum.
3. Use a green raster from among the built-in test signals. See page X X.
4. Loosen the clamp screw holding the yoke and slide the yoke backward or forward to provide vertical green belt (zone) in the picture screen.

5. Remove the Rubber Wedges.
6. Rotate and spread the tabs of the purity magnet (See figure 3.) around the neck of the picture tube until the green belt is in the center of the screen. At the same time, enter the raster vertically.
7. Slowly move the yoke forward or backward until a uniform green screen is obtained. Tighten the clamp screw of the yoke temporarily.
8. Check the purity of the red and blue raster.

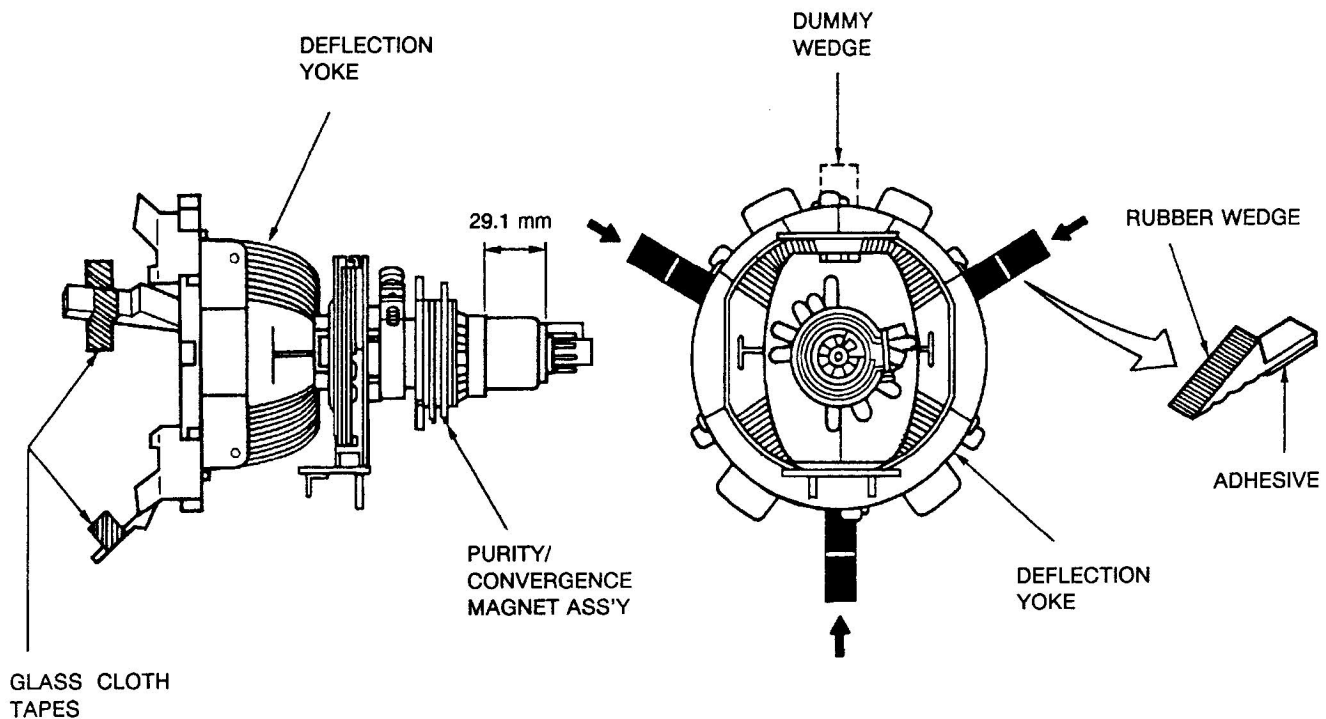


Figure 2.

CONVERGENCE ADJUSTMENTS

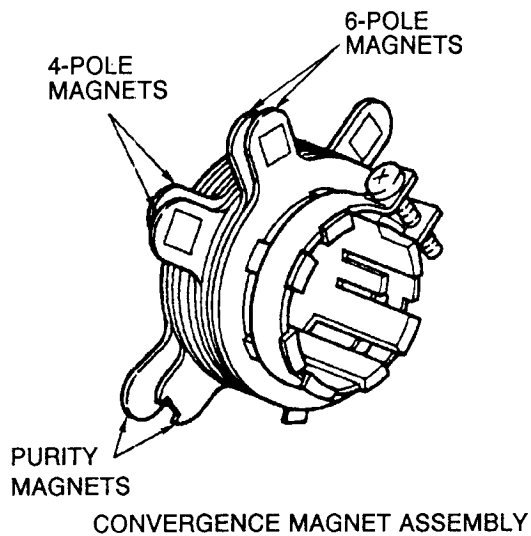
NOTE: Before attempting any convergence adjustments, the receiver should be operated for at least fifteen minutes.

■ CENTER CONVERGENCE ADJUSTMENT

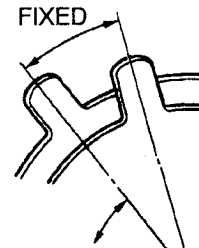
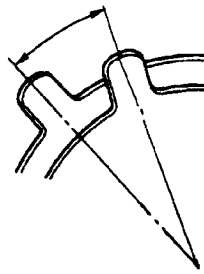
1. Use the cross-dot pattern from among the built-in test signals. See page 35.
2. Set the brightness and contrast for well defined pattern.
3. Adjust two tabs of the 4-Pole Magnets to change the angle between them (See figure 3.) and superimpose red and blue vertical lines in the center area of the picture screen.
4. Turn the both tabs at the same time keeping the angle constant to superimpose red and blue horizontal lines at the center of the screen.
5. Adjust two tabs of 6-Pole Magnets to superimpose red/blue line and green one. Adjusting the angle affects the vertical lines and rotating both magnets affects the horizontal lines.
6. Repeat adjustments 3, 4, 5 keeping in mind red, green and blue movement, because 4-Pole Magnets and 6-Pole Magnets have mutual interaction and make dot movement complex.

■ CIRCUMFERENCE CONVERGENCE ADJUSTMENT

1. Loosen the clamping screw of deflection yoke slightly to allow the yoke to tilt.
2. Temporarily put a wedge as shown in figure 2. (Do not remove cover paper on adhesive part of the wedge.)
3. Tilt front of the deflection yoke up or down to obtain better convergence in circumference. (See figure 4.) Push the mounted wedge into the space between picture tube and the yoke to fix the yoke temporarily.
4. Put other wedge into bottom space and remove the cover paper to stick.
5. Tilt front of the yoke right or left to obtain better convergence in circumference. (See figure 4.)
6. Keep the yoke position and put another wedge in either upper space. Remove cover paper and stick the wedge on picture tube to fix the yoke.
7. Detach the temporarily mounted wedge and put it in another upper space. Stick it on picture tube to fix the yoke.
8. After fixing three wedges, recheck overall convergence.
Tighten the screw firmly to fix the yoke and check the yoke is firm.
9. Stick three adhesive tapes on wedges as shown in figure 2.



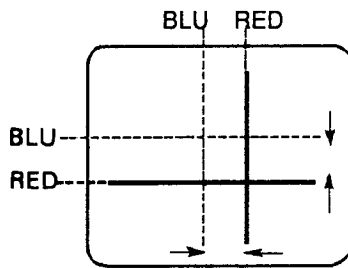
ADJUST THE ANGLE
(VERTICAL LINES)



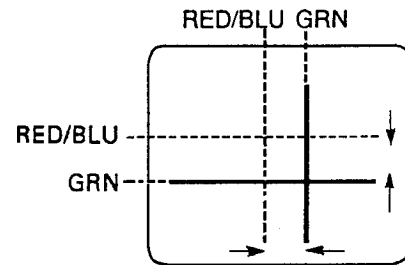
ROTATE TWO TABS
AT THE SAME TIME
(HORIZONTAL LINES)

ADJUSTMENT OF MAGNETS

Figure 3.

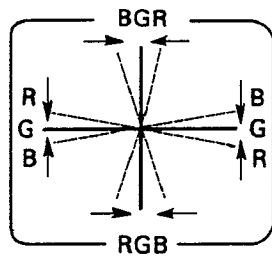


4-POLE MAGNETS MOVEMENT

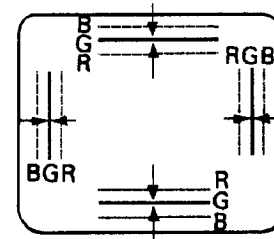


6-POLE MAGNETS MOVEMENT

Center Convergence by Convergence Magnets



INCLINE THE YOKE UP (OR DOWN)



INCLINE THE YOKE RIGHT (OR LEFT)

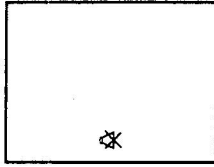
Circumference Convergence by DEF Yoke

Figure 4. Dot Movement Pattern

SERVICE MODE GENERAL INSTRUCTIONS

1. ENTERING TO SERVICE MODE

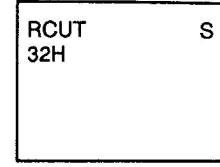
1) Press  button once on Remote Control.



2) Press  button again to keep pressing.



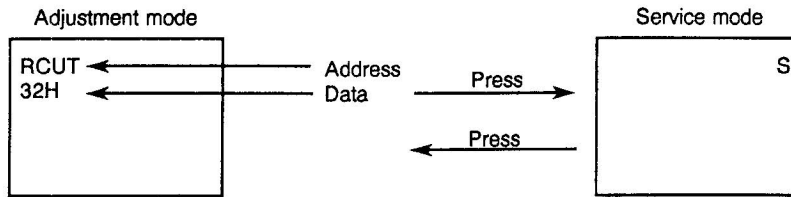
3) Keep pressing the  button, press MENU button on TV set.



(Service mode display)

2. DISPLAYING THE ADJUSTMENT MENU

Press MENU button on TV.



3. SELECTING THE ADJUSTING ITEMS

Every pressing of CHANNEL  button changes the adjustment items in the following order. ( button for reverse order.)

4. ADJUSTING THE DATA

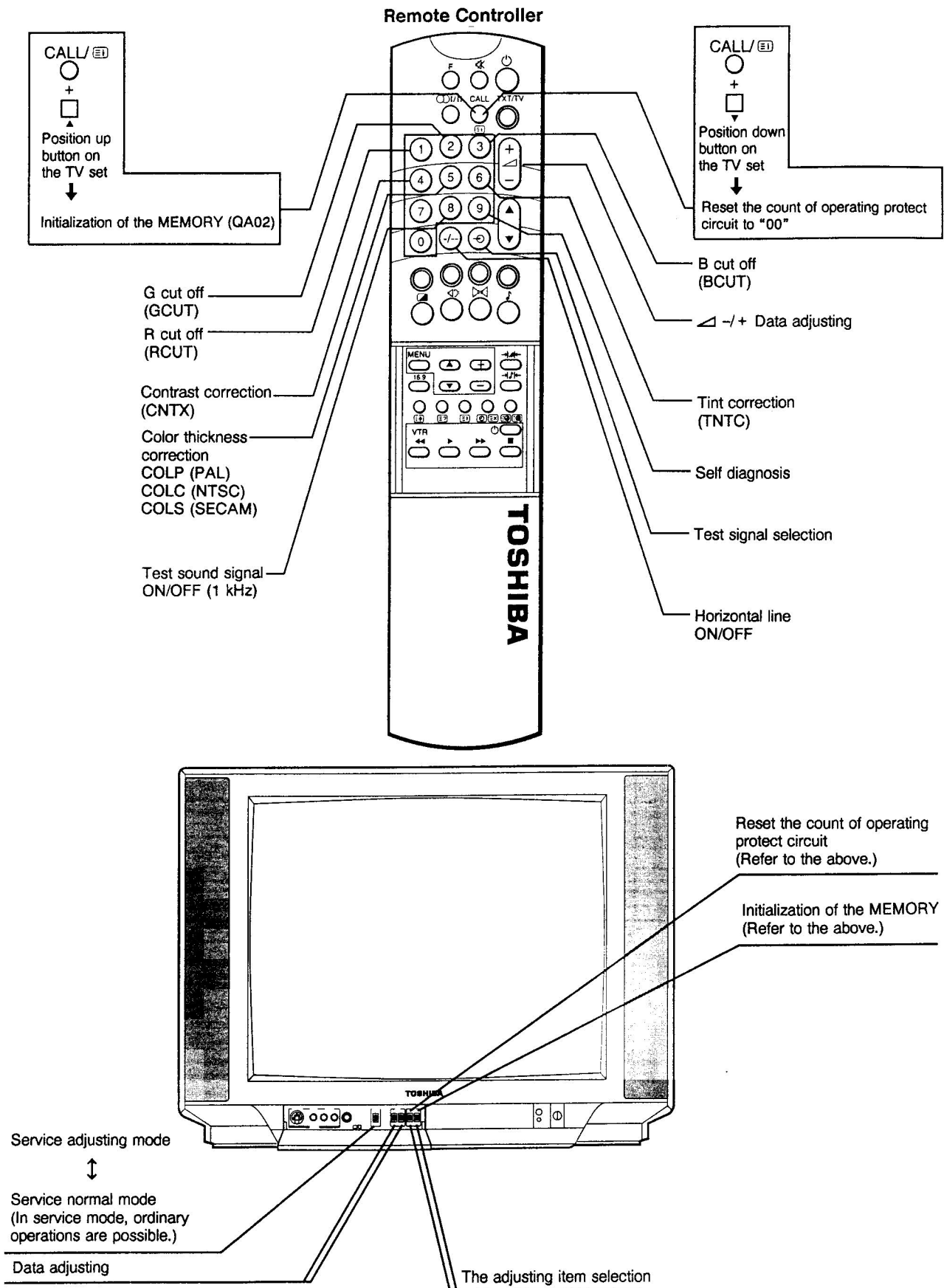
Pressing of VOLUME  or  button will change the value of data in the range from 00 to FF. The variable range depends on the adjusting item.

5. EXIT FROM SERVICE MODE

Press POWER button to turn off the TV once.

OTHER SERVICE FUNCTION

The following key entry during display of adjustment menu provides special functions.



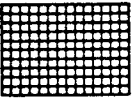
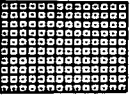
TEST SIGNAL SELECTION

Every pressing of  button changes the test patterns on screen as described below in SERVICE MODE.

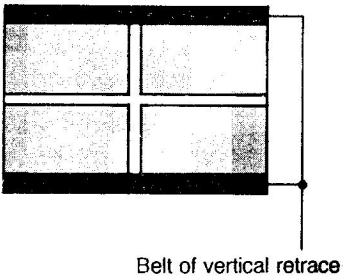
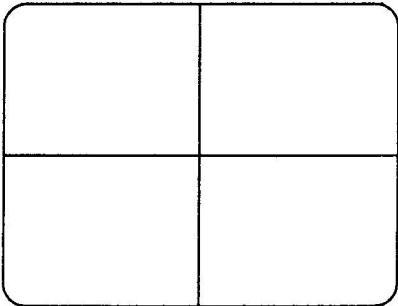
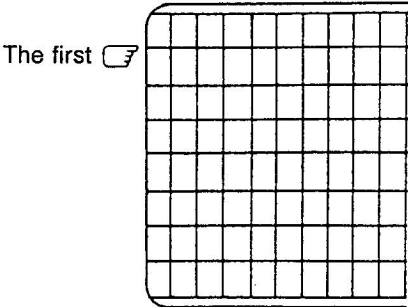
Signal off → NTSC signals (14 patterns)

↑ PAL signals (14 patterns) ←

- About inside signal: The inside signal is output at video input terminal from QA01, and is not output with the pin inserted into terminal. (Single color signal can be output.)

Signals	Picture	Using method
• Red single color • Green single color • Blue single color • Black single color • White single color		Purity and White uniformity of CRT Red single color. . . . Stopping G and B output of Q501 Green single color. . . . Stopping R and B output of Q501 Blue single color. . . . Stopping R and G output of Q501 Black single color. . . . Making black signal of approx. 1Vp-p in QA01 White single color. . . . Making white signal of approx. 1Vp-p in QA01
• W/B adjustment		White balance adjustment White part. . . . White balance adjustment/check in light area Black part. . . . White balance adjustment/check in dark area ※ Making approx. 1Vp-p signal in QA01.
• Black cross-bar • White cross-bar		Picture position (horizontal, vertical and slant) in CRT adjustment ※ Making approx. 1Vp-p signal in QA01.
• Black cross-hatch • White cross-hatch		Convergence and vertical amplitude adjustment ※ Making approx. 1Vp-p signal in QA01.
• Black cross-dot • White cross-dot		Convergence adjustment ※ Making approx. 1Vp-p signal in QA01.
• H signal (Left, right, white) • H signal (Left, right, black)		For checking (of purity drift) of white uniformity of CRT H signal (Left, right, white). . . . Check in light area H signal (Left, right, black). . . . Check in dark area The adjustment will be the best, if the time when unevenness of color in light area occurs, is a little longer than that in dark area. ※ Making approx. 1Vp-p signal in QA01.

SERVICE MODE ADJUSTMENT

ITEM	ADJUSTMENT PROCEDURE
INITIALIZATION OF QA02 (MEMORY)	After replacing QA02, the following initialization is required. 1. Call up the adjustment mode display following the steps 1 and 2 on page 10. 2. Press the CALL button on the Remote Control and CHANNEL ▲ buttons on the TV set simultaneously. The initialization of QA02 has been completed. 3. Check the picture carefully. If necessary, adjust any adjustment item. Perform "AUTOMATIC SEARCH MEMORY".
SUB-BRIGHTNESS (Address : BRTC) Note: Constrict the picture height until the vertical retrace line appears adjusting the address HIT (HEIGHT).	1. Set CONTRAST to "00", and BRIGHTNESS to "50" by adjusting user controls. 2. Set the TV in service mode to get white cross-bar of inside pattern. 3. Select BRTC (brightness correction), and adjust the ◀ - / + button to reduce the value so that white portion of inside pattern slightly light. 4. Adjust ◀ - / + button to increase the data value of BRTC, and set it just before the difference between the belt of vertical retrace and the border of black portion of inside pattern is visible. After that, return vertical height and contrast. 
HORIZONTAL POSITION ADJUSTMENT (HPOS) VERTICAL POSITION ADJUSTMENT (VPOS)	1. Set the TV in service mode, and get black or white cross-bar signal with VIDEO button on remote hand unit. 2. Select either HPOS (Horizontal picture phase) or VPOS (Vertical picture phase) with CHANNEL ▲, ▼ buttons, and adjust horizontal or vertical picture position in the center of screen with VOLUME ◀ - / + buttons. 
VERTICAL AMPLITUDE ADJUSTMENT (HIT)	1. Set the TV in service mode, and get black or white cross-hatch signal with VIDEO button on remote hand unit. 2. Select HIT (Vertical amplitude) with CHANNEL ▲, ▼ buttons, and adjust vertical amplitude with VOLUME ◀ - / + buttons so that vertical amplitude lacks a little. 3. Adjust vertical amplitude with VOLUME ◀ - / + buttons so that the first bar on cross-hatch signal touches edge of screen. 

ITEM	ADJUSTMENT PROCEDURE
WHITE BALANCE ADJUSTMENT • CUTOFF ADJUSTMENT (RCUT) (GCUT) (BCUT) • DRIVE ADJUSTMENT (GDRV) (BDRV)	1. Set Contrast to 40, and brightness to +20 by picture control. 2. Set the TV in service mode, and get the inside W/B adjusting signal with VIDEO button (see pages 10, 12.). 3. Select RCUT, GCUT and BCUT with CHANNEL ▲, ▼ buttons, to set individual values to 32, and to set GDRV and BDRV to 20 with VOLUME ▲ - / + buttons. 4. Press -/- - button on the remote control and rotate Screen VR to get one slight horizontal line on screen. Note: Every pressing of -/- - button provides Horizontal line picture and Normal picture alternately. 5. Press -/- - button to release horizontal line picture, and select the two other colors which did not light in the above step with CHANNEL ▲, ▼ buttons. Then tap VOLUME ▲ - / + buttons so that three colors slightly light in the same level. ※ To correct white balance in light area, select GDRV and BDRV with CHANNEL ▲, ▼ buttons to adjust. ※ To correct white balance in dark area, perform fine adjustment of RCUT, GCUT and BCUT. Light area check (to show white) Dark area check (to show black)

SELF DIAGNOSTIC FUNCTION

1) Press "9" button on Remote Control during display of adjustment menu.

The diagnosis will begin to check if interface among IC's are executed properly.

2) During diagnosis, the following displays are shown.

	{SELF CHECK}
①	23904981
②	POWER : 00
③	BUS LINE : OK
④	BUS CONT : OK
⑤	BLOCK : UV V1 V2
	QV01

- ① Part number of microcomputer (QA01)
- ② Operation number of protecting circuit ----"00" is normal.
When indication is other than "00", overcurrent apt to flow, and circuit parts may possibly be damaged.
- ③ BUS LINE CHECK ----"OK" is normal.
"SDA1-GND" means that SDA line is shorted to ground.
"SCL1-GND" means that SCL line is shorted to ground.
"SCL1-SDA1" means that SDA line is shorted to SCL line.
- ④ BUS CONT ----"OK" is normal.
When indication shows "QOOO NG", the device with the number may possibly be damaged.

⑤ BLOCK

UV : TV reception mode

V1 : VIDEO 1 input mode (→ 1)

V2 : VIDEO 2 input mode (→ 2)

Indicated color of mode now selected : Green and Red
Indicated color of other modes : White

Green : Normal

Red : The microcomputer operates to provide judgement of no video signal. The red color is still indicated though the signal is input, failure may exist in input signal line including QV01.

QV01 : In case of indication green ---Normal
In case of indication red with input signal---
Failure may exist in output line including QV01.

ADJUSTMENT OF VIDEO-CHROMA SYSTEM (Factory adjustment)

Model Name: C5SS

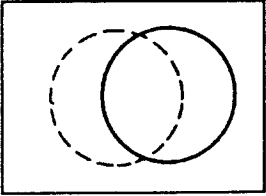
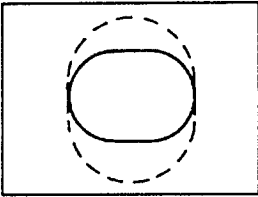
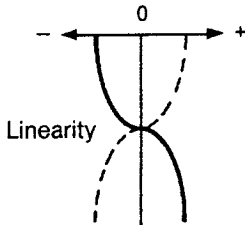
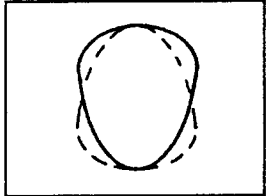
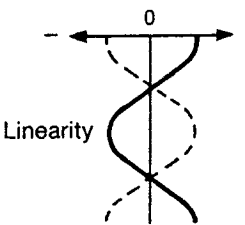
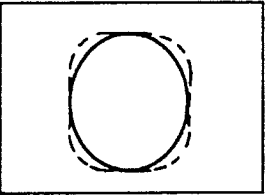
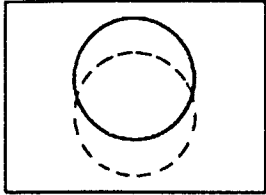
Item	Name	Setting (User control)	Input signal	Measure- ment point	Adjustment procedure	Adjustment standard
[COLP]	SUB COLOR PAL	Contrast: MAX Bright : CENTER Color : CENTER	Sub-bright signal (PAL)	IC501 #55 (TP501)	1. Select slave address 0CH [COLP]. 2. When [COLP] is selected, Y-signal is muted and only color signals are outputted. 3. Adjust amplitude of the upper half of the color bar output.	1.35V(p-p) ± 0.2V(p-p)
[RCUT] [GCUT] [BCUT] Screen VR	R cut-off G cut-off B cut-off Screen	RCUT) 40 Hexa-decimal GCUT) BCUT) GDRV) 40 Hexa-decimal BDRV) Select horizontal line mode by pressing -/- button on the remote control in service mode.		Screen adjustment	1. Set the controls as shown in the left column. 2. Gradually increase the screen VR (T461) until one of R, G or B line begins to brighten slightly. 3. Determine the position of the screen VR here. 4. Adjust RCUT, GCUT and BCUT, brighten other lines until they begin to light slightly. (Adjust DATA so that the line becomes almost white.) 5. Press -/- button on the remote control to escape from the horizontal line mode.	—
[RCUT] [GCUT] [BCUT] [GDRV] [BDRV]	R cut-off G cut-off B cut-off G drive B drive (White balance)	Contrast: MAX Bright : CENTER Color : CENTER	White, etc.	Screen adjustment	1. This adjustment must be done after adjustment of the above-mentioned cut-off and screen VR's have been completed. 2. Adjust cut-off and drive DATA alternately. 3. Use a checker to adjust brightness by changing modulation factor.	HIGH LIGHT; (103cd/m ³) 7195K -0.005uv DARK; (17cd/m ³) 7695K ± 0uv

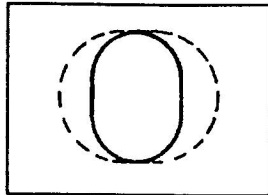
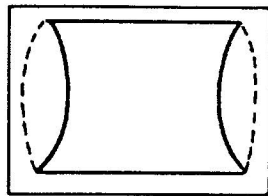
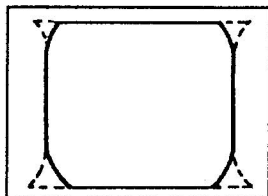
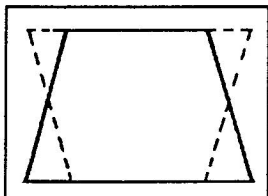
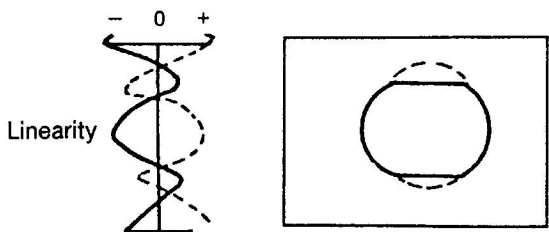
ADJUSTMENT PROCEDURE

Model name: C5SS (2857DB/3357DB)

Adjustment parts or Bus control item	Input point/ Output point	Adjustment signal	Adjustment conditions and procedures
: Horizontal amplitude adjustment (WID) : Pin distortion compensation amount adjustment (PARA) : Keystone distortion compensation amount adjustment (HCP)	Visual check of picture (Bus control)	WG Philips pattern Do not use the Philips pattern of FRANCESECAM.	1. Conditions: After V. HEIGHT, VERT POSITION and H. CENT have been adjusted, set the controllers as follows: Contrast: MAX Brightness: Center Color: Center 2. Adjustment procedure a. Adjust the horizontal amplitude by the sub address WID. Adjust so that the left and right white flags of Philips pattern disappear at the very limits. b. Make the left and right vertical bars straight by the sub address PARA. c. Compensate the key distortion by the sub address HCP. d. Again, adjust the sub address WID.

SUB DATA ADDITIONAL DESCRIPTION

Symbol	Description
HPOS	H screen position correction. 
HIT	V amplitude adjustment. 
VLIN	V linearity correction 1.   Linearity balance between top and bottom screen.
VSC	V linearity correction 2.   Linearity balance between top/bottom and center.
VPOS VPS	V picture position adjustment. 

Symbol	Description
VCP	Setting of amount of V amplitude correction against variation of screen brightness.
WID	H amplitude adjustment. 
PARA	H pin-cushion distortion correction. 
CNR	H pin-cushion distortion correction at four corners. 
TRAP	Pedestal distortion correction. 
HCP	Setting of amount of H amplitude correction against variation of screen brightness.
VFC	V linearity correction. Linearity balance at 1/4, 3/4 areas from top. 

MULTI BUS E2PROM ADDRESS, ADJUSTING ADDRESS TABLE

Adjusting method	QA02 memory address	Name of item	Value of Initializing QA02 (Hexa-decimal)	Adjustments
F	03H	RCUT	40H	R CUTOFF (B/W)
	04H	GCUT	40H	G CUTOFF (B/W)
↓	05H	BCUT	40H	B CUTOFF (B/W)
	06H	GDRV	40H	G DRIVE
S	07H	BDRV	40H	B DRIVE
	08H	CNTX	7FH	SUB CONTRAST MAX (4:3 MODE)
F	09H	BRTC	7FH	SUB BRIGHT CEN
	0AH	COLC	50H	SUB COLOR CEN NTSC
↓	0BH	TNTC	40H	SUB TINT CEN
	0CH	COLP	50H	SUB COLOR CEN PAL
S	0DH	COLS	50H	SUB COLOR CEN SECAM
	0EH	SCOL	8FH	SUB COLOR
↓	0FH	SCNT	7FH	SUB CONTRAST
	25H	VOLS	00H	VOL SCART
↓	26H	FVOL	00H	FM VOL PRE SCALE
	27H	NVOL	00H	NICAM VOL PRE SCALE
↓	28H	NICL	00H	NICAM THRESHOLD LEVEL
	29H	NICH	00H	NICAM THRESHOLD LEVEL
↓	2AH	IDL	00H	IGR THRESHOLD LEVEL
	2BH	IDH	00H	IGR THRESHOLD LEVEL
↓	2CH	EVOL	00H	EXT PRE. VOLUME
	2DH	EMX	FCH	NICAM ON LEVEL
↓	2EH	EMN	64H	NICAM OFF LEVEL
	2FH	FMA	00H	FM ATTENUATOR LEVEL
F	30H	STS	00H	STEREO SEPARATION
	31H	HPOS	15H	50Hz H-POSITION
↓	32H	VPOS	04H	V-POSITION
	33H	HIT	3EH	HEIGHT
↓	37H	VLIN	11H	V-LINEARITY
	38H	VSC	0FH	V-S CORRECTION
↓	39H	VPS	0EH	V-SHIFT
	3AH	VCP	06H	V-COMPENSATION
F	3BH	WID	0FH	PICTURE WIDTH
	3CH	PARA	2AH	E-W PARABOLA
↓	3DH	CNR	06H	E-W CORNER
	3EH	TRAP	1FH	TRAPEZIUM
↓	3FH	HCP	02H	H-COMPENSATION
	40H	VFC	0EH	V-F CORRECTION
↓	C9H	BELL	00H	SECAM BELL FILTER
	CAH	SRY	08H	SECAM R-Y
↓	CBH	SBY	08H	SECAM B-Y

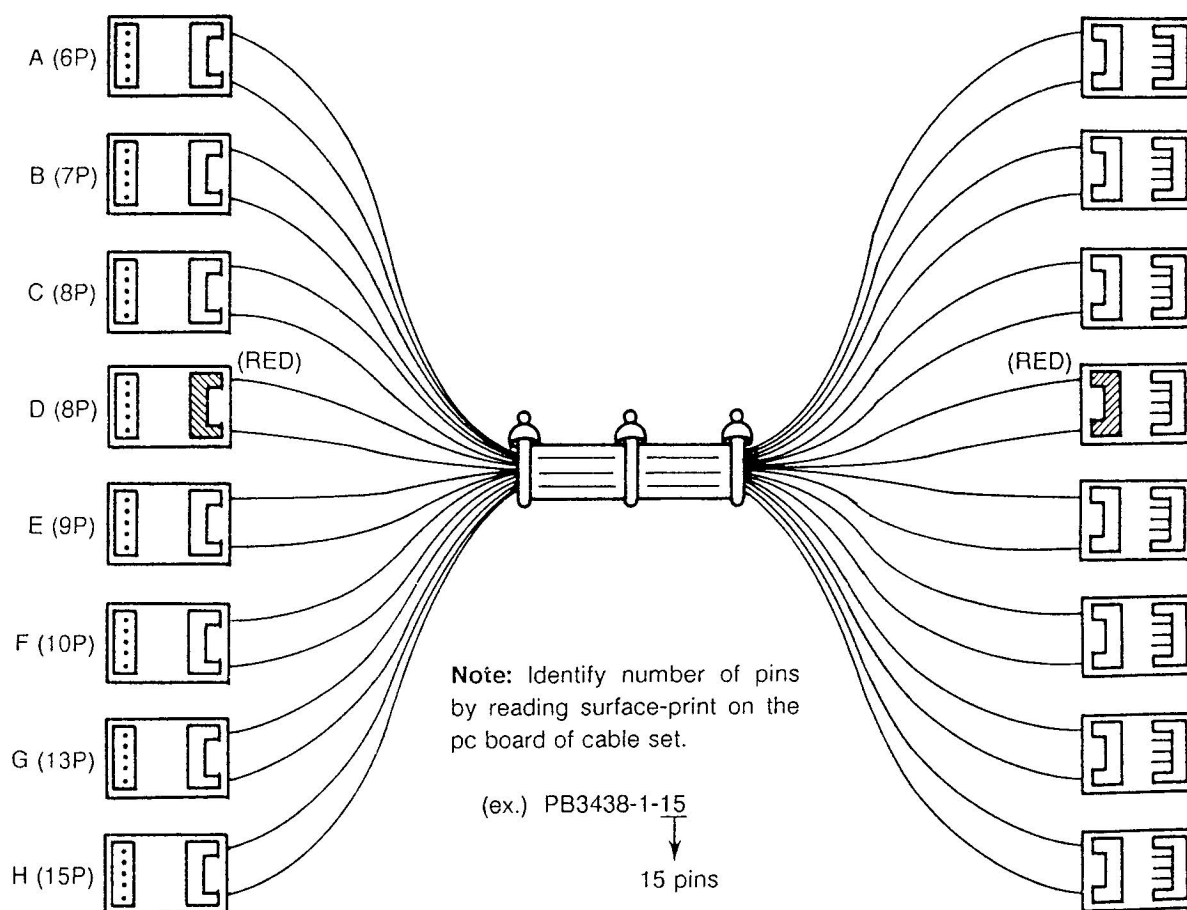
S ... semi-fixed data area which is fixed by model. (Do not adjust in field service.)

F ... This item may require adjustments by models after initialization, when QA02 is replaced.

EXTENSION CABLE SET

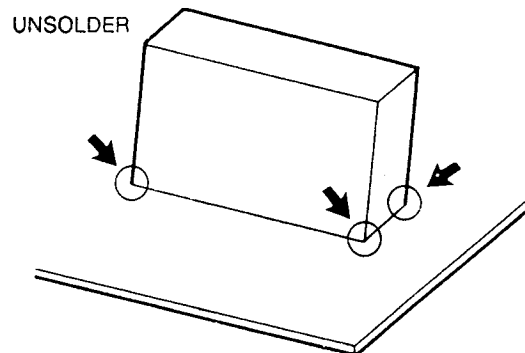
1. Extension Cable Set is available for servicing modules.
For C5SS chassis, however, this cable is used only for PRO-LOGIC, TELETEXT/RGB and COMB FILTER modules. (See reference table on next page.)
2. Identify number of pins by reading surface-print on the pc board of cable set.

Part No.	Description
23305270	Extension Cable Set

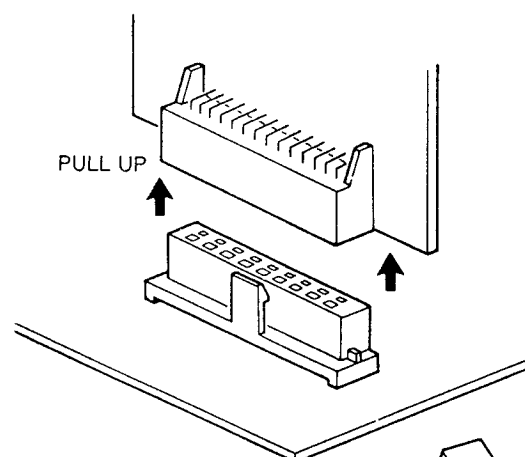


TO USE THE CABLE SET

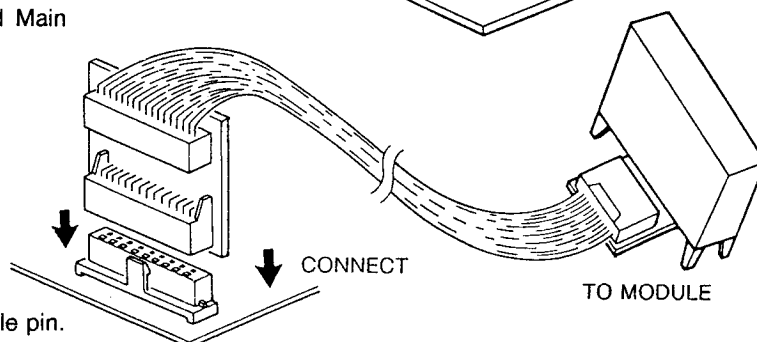
1. Unsolder corners on shielding case of module, which are marked with arrow in the figure.



2. Remove shielding case, and pull up module to disconnect.



3. Connect Extension Cable Set to module and Main board.

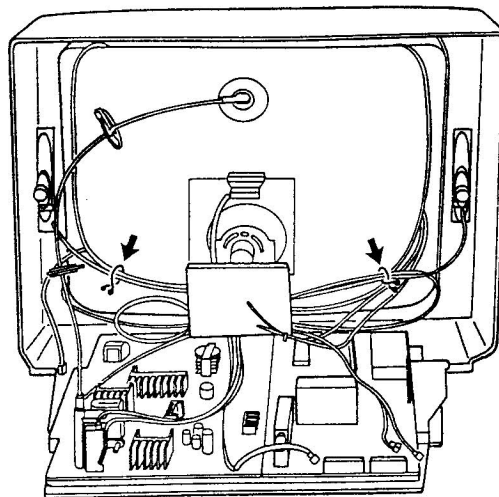


4. Reference chart of module and extension cable pin.

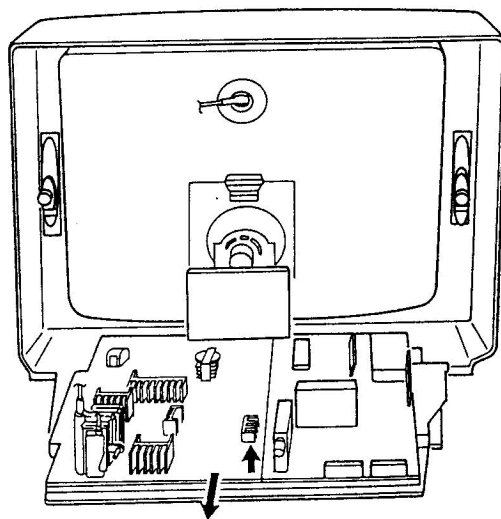
Board name	UK	FRANCE	ITALY	NORTH EUROPE/ SPAIN	GERMANY	Remarks
PRO-LOGIC	15P	15P	—	—	15P	
TELETEXT/ RGB	15P 7P	15P 7P	15P 7P	— —	15P 7P	
COMB FILTER	10P	10P	10P	—	10P	SECAM/1H DELAY circuit can not be used because of 11 pin connector.

HOW TO MAKE THE CHASSIS STAND FOR REPAIR OF THE 2857DB

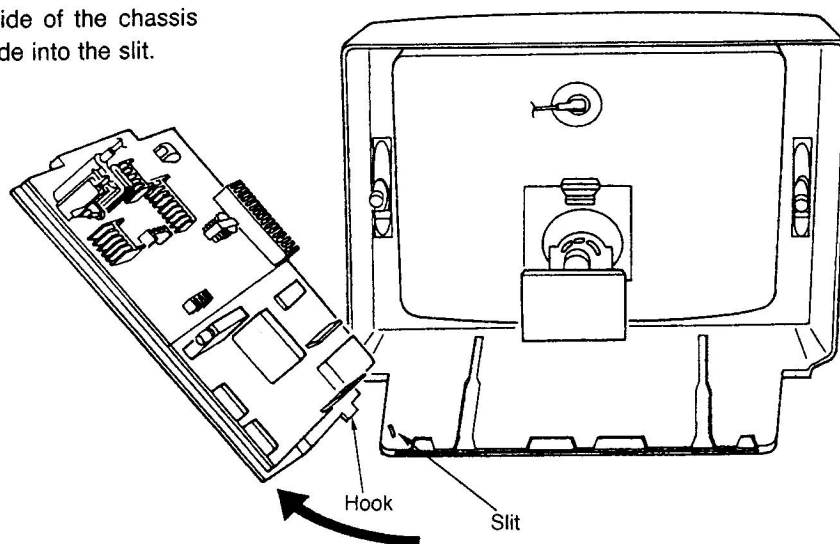
1. Disconnect the lead wires for the speaker fixed to the degausser coil with three omega clips.



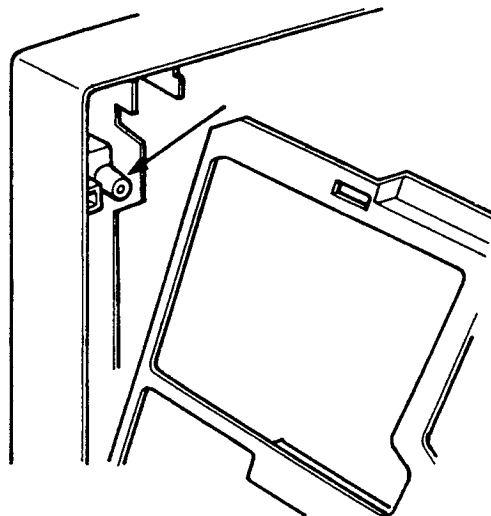
2. Lifting up slightly, pull out the chassis from the front mask.



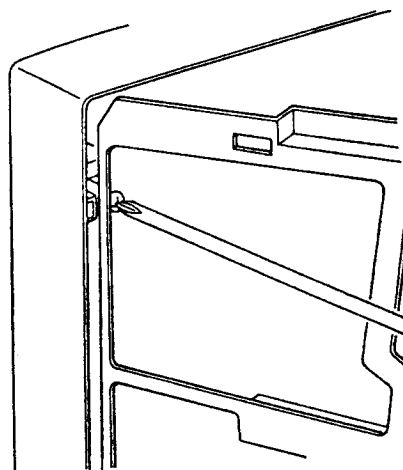
3. There is a slit at the left front of the bottom side of the front mask. Lift up the left side of the chassis and insert the hook at the right side into the slit.



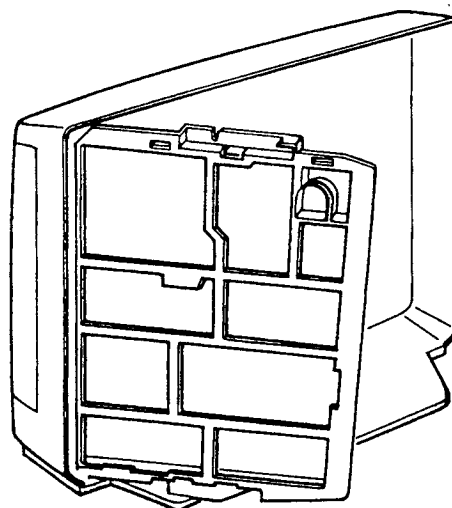
4. To retain the chassis, use the upper left boss (highest boss) which is marked with No. 29.



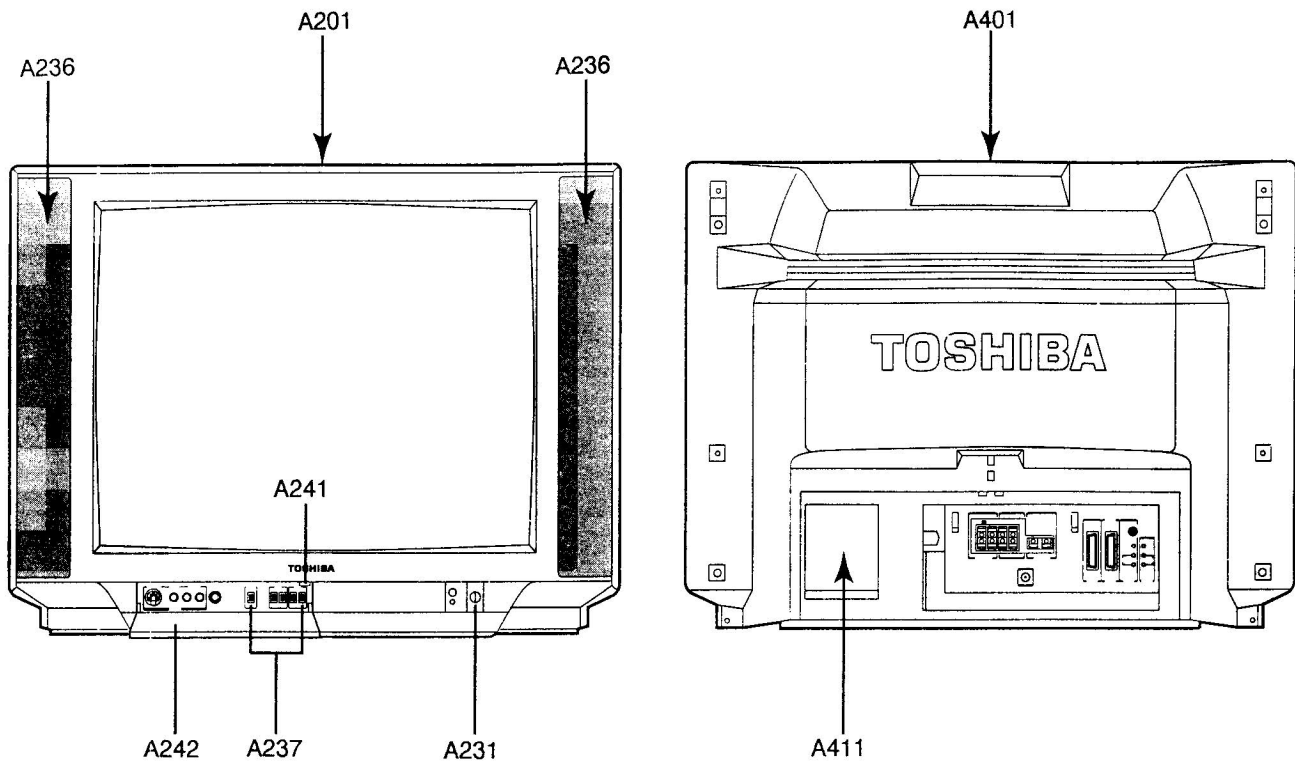
5. Fix it with screws for back cover fixing.
Upper hole of the chassis frame.



6. After repair works, restore the unit by reversing the above steps.



CABINET REPLACEMENT PARTS LIST



Location No.	Part No.	Description
A201	23410670	Front Cover
A231	23443960	Button, POWER
A236	23519223	Speaker Grille
A237	23443966	Button, Control
A239	23460702	Trim
A241	70368125	Push Catch for Door
A242	23426566	Door
A340	23410676	SP Box Front (Surround SPK)
A341	23426411	SP Box Back (Surround SPK)
A343	23948114	SP Wire Ass'y
A344	23466653	Bushing, SP Box (Surround SPK)
A345	23421715	Plug
△ A401	23426393	Back Cover
A411	23569544	Label, Model No. (2857DB)

CHASSIS REPLACEMENT PARTS LIST

WARNING: BEFORE SERVICING THIS CHASSIS, READ THE "X-RAY RADIATION PRECAUTION", "SAFETY PRECAUTION" AND "PRODUCT SAFETY NOTICE" ON PAGE 2 OF THIS MANUAL.

CAUTION: The international hazard symbols "⚠" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the PRODUCT SAFETY NOTICE on page 2. Do not degrade the safety of the receiver through improper servicing.

NOTICE:

- The part number must be used when ordering parts, in order to assist in processing, be sure to include the Model number and Description.
- The PC board assembly with * mark is no longer available after the end of the production.

ABBREVIATIONS:

Capacitors.....	CD : Ceramic Disk	PF : Plastic Film	EL : Electrolytic
Resistors.....	CF : Carbon Film	CC : Carbon Composition	MF : Metal Film
	OMF : Oxide Metal Film	VR : Variable Resistor	FR : Fusible Resistor

(All CD and PF capacitors are $\pm 5\%$, 50V and all resistors, $\pm 5\%$, 1/6W unless otherwise noted.)

Location No.	Part No.	Description
CAPACITORS		
C101	24797229	EL, 2.2 μ F, $\pm 20\%$, 50V
C102	24763221	EL, 220 μ F, $\pm 20\%$, 16V
C103	24232103	CD, 0.01 μ F, +80%, -20%
C104	24794470	EL, 47 μ F, $\pm 20\%$, 16V
C105	24212102	CD, 1000pF, $\pm 10\%$
C106	24797100	EL, 10 μ F, $\pm 20\%$, 50V
C107	24763221	EL, 220 μ F, $\pm 20\%$, 16V
C108	24763101	EL, 100 μ F, $\pm 20\%$, 16V
C115	24232103	CD, 0.01 μ F, +80%, -20%
C190	24474102	CD, 1000pF, $\pm 10\%$
C201	24206100	EL, 10 μ F, 50V
C203	24538104	PF, 0.1 μ F
C204	24206010	EL, 1 μ F, 50V
C205	24206229	EL, 2.2 μ F, 50V
C206	24206100	EL, 10 μ F, 50V
C207	24436270	CD, 27pF
C208	24436270	CD, 27pF
C209	24436270	CD, 27pF
C212	24794100	EL, 10 μ F, $\pm 20\%$, 16V
C213	24436820	CD, 82pF
C214	24538334	PF, 0.33 μ F
C303	24214471	CD, 470pF, $\pm 10\%$, 500V
C305	24617915	EL, 1 μ F, $\pm 10\%$, 50V
C306	24073060	EL, 4700 μ F, $\pm 20\%$, 25V
C307	24693473	PF, 0.047 μ F, 100V
C308	24668221	EL, 220 μ F, $\pm 20\%$, 35V
C309	24591102	PF, 1000pF
C310	24796222	EL, 2200 μ F, $\pm 20\%$, 35V
C311	24214561	CD, 560pF, $\pm 10\%$, 500V
C313	24082057	PF, 0.22 μ F, 100V
C314	24591563	PF, 0.056 μ F
C315	24797229	EL, 2.2 μ F, $\pm 20\%$, 50V
C316	24539104	PF, 0.1 μ F
C318	24666101	EL, 100 μ F, $\pm 20\%$, 16V
C319	24212102	CD, 1000pF, $\pm 10\%$
C320	24668101	EL, 100 μ F, $\pm 20\%$, 35V
C321	24591203	PF, 0.02 μ F
C322	24617912	EL, 2.2 μ F, $\pm 10\%$, 50V
C323	24538224	PF, 0.22 μ F
C324	24538683	PF, 0.068 μ F

Location No.	Part No.	Description
C326	24591682	PF, 6800pF
C327	24617787	EL, 470 μ F, $\pm 20\%$, 16V
C328	24232103	CD, 0.01 μ F, +80%, -20%
C330	24212102	CD, 1000pF, $\pm 10\%$
C341	24797478	EL, 0.47 μ F, $\pm 20\%$, 50V
C370	24794101	EL, 100 μ F, $\pm 20\%$, 16V
C371	24794100	EL, 10 μ F, $\pm 20\%$, 16V
C401	24538104	PF, 0.1 μ F
C403	24591203	PF, 0.02 μ F
C404	24797229	EL, 2.2 μ F, $\pm 20\%$, 50V
C413	24214821	CD, 820pF, $\pm 10\%$, 500V
C415	24591392	PF, 3900pF
C416	24678010	EL, 1 μ F, $\pm 20\%$, 200V
C417	24214391	CD, 390pF, $\pm 10\%$, 500V
C420	24666101	EL, 100 μ F, $\pm 20\%$, 16V
C423	24829823	PF, 0.082 μ F, 400V
C424	24206229	EL, 2.2 μ F, 50V
C425	24590154	PF, 0.15 μ F
C430	24232103	CD, 0.01 μ F, +80%, -20%
C431	24794471	EL, 470 μ F, $\pm 20\%$, 16V
△ C440	24082482	PF, 7000pF, $\pm 3\%$, 1500V
△ C441	24082669	PF, 0.33 μ F, 250V
△ C442	24082672	PF, 0.43 μ F, 250V
△ C444	24082519	PF, 6200pF, $\pm 3\%$, 1800V
C446	24679330	EL, 33 μ F, $\pm 20\%$, 250V
C448	24640908	EL, 33 μ F, $\pm 20\%$, 160V
C460	24796331	EL, 330 μ F, $\pm 20\%$, 35V
△ C463	24212222	CD, 2200pF, $\pm 10\%$
C464	24676339	EL, 3.3 μ F, $\pm 20\%$, 100V
C467	24095883	PF, 0.015 μ F, $\pm 3\%$, 630V
C470	24794220	EL, 22 μ F, $\pm 20\%$, 16V
C472	24538474	PF, 0.47 μ F
C473	24669010	EL, 1 μ F, $\pm 20\%$, 50V
C475	24095887	PF, 0.01 μ F, $\pm 3\%$, 630V
C477	24590563	PF, 0.056 μ F
C478	24590563	PF, 0.056 μ F
C481	24538104	PF, 0.1 μ F
C491	24082721	PF, 1.5 μ F, 250V
C492	24082672	PF, 0.43 μ F, 250V
C494	24214121	CD, 120pF, $\pm 10\%$, 500V
C501	24232103	CD, 0.01 μ F, +80%, -20%

Location No.	Part No.	Description
C502	24232103	CD, 0.01 μ F, +80%, -20%
C503	24763101	EL, 100 μ F, $\pm$ 20%, 16V
C504	24591222	PF, 2200pF
C505	24353120	CD, 12pF
C507	24353120	CD, 12pF
C508	24206100	EL, 10 μ F, 50V
C509	24763101	EL, 100 μ F, $\pm$ 20%, 16V
C510	24763101	EL, 100 μ F, $\pm$ 20%, 16V
C511	24232103	CD, 0.01 μ F, +80%, -20%
C512	24206228	EL, 0.22 μ F, 50V
C513	24232103	CD, 0.01 μ F, +80%, -20%
C514	24538104	PF, 0.1 μ F
C515	24538104	PF, 0.1 μ F
C520	24212102	CD, 1000pF, $\pm$ 10%
C521	24212102	CD, 1000pF, $\pm$ 10%
C522	24436470	CD, 47pF
C523	24436470	CD, 47pF
C613	24794470	EL, 47 μ F, $\pm$ 20%, 16V
C641	24206010	EL, 1 μ F, 50V
C644	24206010	EL, 1 μ F, 50V
C645	24795470	EL, 47 μ F, $\pm$ 20%, 25V
C646	24795470	EL, 47 μ F, $\pm$ 20%, 25V
C647	24591102	PF, 1000pF
C648	24590682	PF, 6800pF
C649	24206229	EL, 2.2 μ F, 50V
C650	24796102	EL, 1000 μ F, $\pm$ 20%, 35V
C651	24668471	EL, 470 μ F, $\pm$ 20%, 35V
C652	24668471	EL, 470 μ F, $\pm$ 20%, 35V
C653	24795470	EL, 47 μ F, $\pm$ 20%, 25V
C654	24591124	PF, 0.12 μ F
C655	24591124	PF, 0.12 μ F
C660	24206229	EL, 2.2 μ F, 50V
C661	24538104	PF, 0.1 μ F
C663	24206229	EL, 2.2 μ F, 50V
C664	24203100	EL, 10 μ F, $\pm$ 20%, 16V
C665	24206229	EL, 2.2 μ F, 50V
C666	24206229	EL, 2.2 μ F, 50V
C667	24212102	CD, 1000pF, $\pm$ 10%
C668	24212102	CD, 1000pF, $\pm$ 10%
C671(U904)	24232103	CD, 0.01 μ F, +80%, -20%
C671(U902A)	24797010	EL, 1 μ F, $\pm$ 20%, 50V
C672	24232103	CD, 0.01 μ F, +80%, -20%
C673(U902A)	24797010	EL, 1 μ F, $\pm$ 20%, 50V
C673(U904)	24474102	CD, 1000pF, $\pm$ 10%
C674(U904)	24474102	CD, 1000pF, $\pm$ 10%
C674(U902A)	24797010	EL, 1 μ F, $\pm$ 20%, 50V
C675(U904)	24474102	CD, 1000pF, $\pm$ 10%
C675(U902A)	24795470	EL, 47 μ F, $\pm$ 20%, 25V
C676(U904)	24474102	CD, 1000pF, $\pm$ 10%
C676(U902A)	24797479	EL, 4.7 μ F, $\pm$ 20%, 50V
C677(U904)	24232103	CD, 0.01 μ F, +80%, -20%
C677(U902A)	24591102	PF, 100pF
C678(U904)	24474102	CD, 1000pF, $\pm$ 10%
C678(U902A)	24591102	PF, 1000pF
C679(U904)	24474102	CD, 1000pF, $\pm$ 10%
C679(U902A)	24538104	PF, 0.1 μ F
C680(U902A)	24668102	EL, 1000 μ F, $\pm$ 20%, 35V
C680(U904)	24232103	CD, 0.01 μ F, +80%, -20%
C681(U902A)	24668471	EL, 470 μ F, $\pm$ 20%, 35V
C681(U904)	24474102	CD, 1000pF, $\pm$ 10%
C682(U904)	24474102	CD, 1000pF, $\pm$ 10%
C682(U902A)	24668471	EL, 470 μ F, $\pm$ 20%, 35V
C683	24668102	EL, 1000 μ F, $\pm$ 20%, 35V
C684	24591124	PF, 0.12 μ F

Location No.	Part No.	Description
C685	24591124	PF, 0.12 μ F
C686	24591124	PF, 0.12 μ F
C688	24203220	EL, 22 μ F, $\pm$ 20%, 16V
C704	24591822	PF, 8200pF
C705	24232103	CD, 0.01 μ F, +80%, -20%
C707	24794470	EL, 47 μ F, $\pm$ 20%, 16V
C712	24666470	EL, 47 μ F, $\pm$ 20%, 16V
C713	24790100	EL, 10 μ F, $\pm$ 20%, 160V
C714	24436101	CD, 100pF
C715	24214472	CD, 4700pF, $\pm$ 10%, 500V
C716	24436101	CD, 100pF
C717	24214472	CD, 4700pF, $\pm$ 10%, 500V
C718	24790470	EL, 47 μ F, $\pm$ 20%, 160V
C720	24790100	EL, 10 μ F, $\pm$ 20%, 160V
C721	24790470	EL, 47 μ F, $\pm$ 20%, 160V
C722	24436561	CD, 560pF
C726	24212102	CD, 1000pF, $\pm$ 10%
△ C801	24082374	PF, 0.22 μ F, AC250V
△ C805	24092281	CD, 4700pF, $\pm$ 20%, AC250V
△ C806	24092281	CD, 4700pF, $\pm$ 20%, AC250V
C808	24667331	EL, 330 μ F, $\pm$ 20%, 25V
C809	24214471	CD, 470pF, $\pm$ 10%, 500V
C810	24086873	EL, 330 μ F, $\pm$ 20%, 400V
C813	24094656	CD, 2200pF, $\pm$ 20%, AC400V
C814	24094656	CD, 2200pF, $\pm$ 20%, AC400V
C816	24669221	EL, 220 μ F, $\pm$ 20%, 50V
C817	24092341	CD, 470pF, $\pm$ 10%, 2kV
C818	24095931	PF, 2200pF, 1250V
C819	24676220	EL, 22 μ F, $\pm$ 20%, 100V
C821	24214471	CD, 470pF, $\pm$ 10%, 500V
C829	24590182	PF, 1800pF
C831	24669470	EL, 47 μ F, $\pm$ 20%, 50V
C833	24669100	EL, 10 μ F, $\pm$ 20%, 50V
C841	24669100	EL, 10 μ F, $\pm$ 20%, 50V
C842	24669100	EL, 10 μ F, $\pm$ 20%, 50V
C843	24590104	PF, 0.1 μ F
C846	24590104	PF, 0.1 μ F
C884	24086916	EL, 330 μ F, $\pm$ 20%, 160V
C885	24214471	CD, 470pF, $\pm$ 10%, 500V
C887	24214471	CD, 470pF, $\pm$ 10%, 500V
C889	24668332	EL, 3300 μ F, $\pm$ 20%, 35V
C892	24667222	EL, 2200 μ F, $\pm$ 20%, 25V
C893	24092337	CD, 220pF, $\pm$ 10%, 2kV
C895	24669470	EL, 47 μ F, $\pm$ 20%, 50V
C896	24214471	CD, 470pF, $\pm$ 10%, 500V
C897	24666222	EL, 2200 μ F, $\pm$ 20%, 16V
C898	24212101	CD, 100pF, $\pm$ 10%
C899	24214471	CD, 470pF, $\pm$ 10%, 500V
C902	24092353	CD, 4700pF, $\pm$ 10%, 2kV
C904	24436271	CD, 270pF
C905	24436271	CD, 270pF
C907	24436271	CD, 270pF
C909	24679220	EL, 22 μ F, $\pm$ 20%, 250V
C910	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
C911	24203100	EL, 10 μ F, $\pm$ 20%, 16V
C912	24794102	EL, 1000 μ F, $\pm$ 20%, 16V
C913	24763102	EL, 1000 μ F, $\pm$ 20%, 16V
C914	24212103	CD, 0.01 μ F, $\pm$ 10%
C920	24591104	PF, 0.1 μ F
C921	24591104	PF, 0.1 μ F
C930	24214101	CD, 100pF, $\pm$ 10%, 500V
C931	24214101	CD, 100pF, $\pm$ 10%, 500V
CA13	24212101	CD, 100pF, $\pm$ 10%
CA22	24212101	CD, 100pF, $\pm$ 10%

Location No.	Part No.	Description
CA23	24212101	CD, 100pF, $\pm 10\%$
CA24	24212101	CD, 100pF, $\pm 10\%$
CA25	24212101	CD, 100pF, $\pm 10\%$
CA30	24212101	CD, 100pF, $\pm 10\%$
CA33	24232103	CD, 0.01 μ F, +80%, -20%
CA37	24212101	CD, 100pF, $\pm 10\%$
CA38	24212101	CD, 100pF, $\pm 10\%$
CA42	24794100	EL, 10 μ F, $\pm 20\%$, 16V
CA43	24232103	CD, 0.01 μ F, +80%, -20%
CA44	24232103	CD, 0.01 μ F, +80%, -20%
CA68	24794100	EL, 10 μ F, $\pm 20\%$, 16V
CA69	24232103	CD, 0.01 μ F, +80%, -20%
CB01	24794470	EL, 47 μ F, $\pm 20\%$, 16V
CD01	24781330	Chip, 33pF, SL
CD02	24590332	PF, 3300pF
CD03	24590332	PF, 3300pF
CD04	24781330	Chip, 33pF, SL
CD05	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD06	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD07	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD08	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD09	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD10	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD11	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD12	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD13	24085988	EL, 1 μ F, $\pm 20\%$, 50V, Non-Polar
CD14	24085988	EL, 1 μ F, $\pm 20\%$, 50V, Non-Polar
CD15	24763101	EL, 100 μ F, $\pm 20\%$, 16V
CD16	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD17	24538104	PF, 0.1 μ F
CD18	24815682	Chip, 6800pF, +80%, -20%, F
CD19	24815682	Chip, 6800pF, +80%, -20%, F
CD20	24781221	Chip, 220pF, SL
CD21	24590682	PF, 6800pF
CD22	24781391	Chip, 390pF, SL
CD23	24781101	Chip, 100pF, SL
CD24	24206010	EL, 1 μ F, 50V
CD25	24590272	PF, 2700pF
CD26	24781330	Chip, 33pF, SL
CD27	24590682	PF, 6800pF
CD28	24781391	Chip, 390pF, SL
CD29	24590272	PF, 2700pF
CD30	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD31	24781330	Chip, 33pF, SL
CD32	24781101	Chip, 100pF, SL
CD33	24206010	EL, 1 μ F, 50V
CD34	24590272	PF, 2700pF
CD35	24590682	PF, 6800pF
CD36	24781391	Chip, 390pF, SL
CD37	24781680	Chip, 68pF, SL
CD38	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD39	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD40	24206229	EL, 2.2 μ F, 50V
CD41	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD42	24206229	EL, 2.2 μ F, 50V
CD43	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD44	24590154	PF, 0.15 μ F
CD45	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD46	24781680	Chip, 68pF, SL
CD47	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD48	24781101	Chip, 100pF, SL
CD49	24203100	EL, 10 μ F, $\pm 20\%$, 16V

Location No.	Part No.	Description
CD50	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD51	24781680	Chip, 68pF, SL
CD52	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD53	24763471	EL, 470 μ F, $\pm 20\%$, 16V
CD54	24781101	Chip, 100pF, SL
CD55	24206010	EL, 1 μ F, 50V
CD56	24206010	EL, 1 μ F, 50V
CD57	24206010	EL, 1 μ F, 50V
CD58	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD59	24591273	PF, 0.027 μ F
CD60	24591822	PF, 8200pF
CD61	24206010	EL, 1 μ F, 50V
CD62	24092293	Chip, 0.1 μ F, +80%, -20%, 25V
CD63	24092293	Chip, 0.1 μ F, +80%, -20%, 25V
CD64	24092293	Chip, 0.1 μ F, +80%, -20%, 25V
CD65	24206010	EL, 1 μ F, 50V
CD66	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD67	24781330	Chip, 33pF, SL
CD68	24781330	Chip, 33pF, SL
CD69	24205479	EL, 4.7 μ F, $\pm 20\%$, 35V
CD70	24092293	Chip, 0.1 μ F, +80%, -20%, 25V
CD71	24538104	PF, 0.1 μ F
CD72	24762221	EL, 220 μ F, $\pm 20\%$, 10V
CD73	24762221	EL, 220 μ F, $\pm 20\%$, 10V
CD74	24538104	PF, 0.1 μ F
CD75	24781102	Chip, 1000pF, SL
CD76	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD77	24814103	Chip, 0.01 μ F, +80%, -20%
CD78	24763101	EL, 100 μ F, $\pm 20\%$, 16V
CD79	24814103	Chip, 0.01 μ F, +80%, -20%
CD80	24202101	EL, 100 μ F, 10V
CD81	24781221	Chip, 220pF, SL
CD82	24203100	EL, 10 μ F, $\pm 20\%$, 16V
CD83	24814103	Chip, 0.01 μ F, +80%, -20%
CG01	24538224	PF, 0.22 μ F
CG02	24590104	PF, 0.1 μ F
CG03	24590104	PF, 0.1 μ F
CG04	24206010	EL, 1 μ F, 50V
CG05	24203220	EL, 22 μ F, $\pm 20\%$, 16V
CG06	24232103	CD, 0.01 μ F, +80%, -20%
CG07	24206010	EL, 1 μ F, 50V
CG08	24206010	EL, 1 μ F, 50V
CG09	24206010	EL, 1 μ F, 50V
CG10	24232103	CD, 0.01 μ F, +80%, -20%
CG11	24232103	CD, 0.01 μ F, +80%, -20%
CG12	24590273	PF, 0.027 μ F
CG13	24232103	CD, 0.01 μ F, +80%, -20%
CG14	24203101	EL, 100 μ F, $\pm 20\%$, 16V
CG15	24590822	PF, 8200pF
CG16	24206010	EL, 1 μ F, 50V
CG17	24590273	PF, 0.027 μ F
CG18	24590822	PF, 8200pF
CG21	24590273	PF, 0.027 μ F
CG22	24206010	EL, 1 μ F, 50V
CG23	24590822	PF, 8200pF
CG24	24206100	EL, 10 μ F, 50V
CG25	24212102	CD, 1000pF, $\pm 10\%$
CG26	24206100	EL, 10 μ F, 50V
CG27	24206229	EL, 2.2 μ F, 50V
CG28	24206229	EL, 2.2 μ F, 50V
CG41	24203470	EL, 47 μ F, $\pm 20\%$, 16V
CQ19	24590103	PF, 0.01 μ F
CQ20	24538104	PF, 0.1 μ F
CQ21	24794470	EL, 47 μ F, $\pm 20\%$, 16V

Location No.	Part No.	Description
CQ22	24232103	CD, 0.01 μ F, +80%, -20%
CQ23	24538104	PF, 0.1 μ F
CQ24	24538104	PF, 0.1 μ F
CQ25	24797100	EL, 10 μ F, $\pm$ 20%, 50V
CQ26	24538104	PF, 0.1 μ F
CQ27	24538104	PF, 0.1 μ F
CQ28	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
CQ29	24794101	EL, 100 μ F, $\pm$ 20%, 16V
CQ30	24232103	CD, 0.01 μ F, +80%, -20%
CQ31	24797478	EL, 0.47 μ F, $\pm$ 20%, 50V
CQ32	24590103	PF, 0.01 μ F
CQ33	24538104	PF, 0.1 μ F
CQ34	24538104	PF, 0.1 μ F
CQ35	24206478	EL, 0.47 μ F, 50V
CQ36	24206478	EL, 0.47 μ F, 50V
CQ37	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CQ38	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CQ39	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CR01	24538104	PF, 0.1 μ F
CR02	24538104	PF, 0.1 μ F
CR03	24538104	PF, 0.1 μ F
CR05	24232103	CD, 0.01 μ F, +80%, -20%
CR06	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CR12(U907)	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CR12(U902A)	24538104	PF, 0.1 μ F
CR13	24538104	PF, 0.1 μ F
CR14	24538104	PF, 0.1 μ F
CS01	24085944	EL, 2.2 μ F, $\pm$ 20%, 50V, Non-Polar
CS02	24085944	EL, 2.2 μ F, $\pm$ 20%, 50V, Non-Polar
CS03	24206229	EL, 2.2 μ F, 50V
CS04	24206229	EL, 2.2 μ F, 50V
CS05	24206229	EL, 2.2 μ F, 50V
CS06	24206229	EL, 2.2 μ F, 50V
CS07	24206229	EL, 2.2 μ F, 50V
CS08	24206229	EL, 2.2 μ F, 50V
CS09	24206010	EL, 1 μ F, 50V
CS12	24474102	CD, 1000pF, $\pm$ 10%
CS13	24474102	CD, 1000pF, $\pm$ 10%
CS14	24206100	EL, 10 μ F, 50V
CS15	24206100	EL, 10 μ F, 50V
CS17	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CS18	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CS19	24206478	EL, 0.47 μ F, 50V
CS22	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CS23	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CS181	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CS182	24797010	EL, 1 μ F, $\pm$ 20%, 50V
CT01	24590104	PF, 0.1 μ F
CT02	24353080	CD, 8pF, $\pm$ 0.25pF
CT03	24353150	CD, 15pF
CT04	24212102	CD, 1000pF, $\pm$ 10%
CT05	24590104	PF, 0.1 μ F
CT06	24590104	PF, 0.1 μ F
CT07	24085944	EL, 2.2 μ F, $\pm$ 20%, 50V, Non-Polar
CT08	24232103	CD, 0.01 μ F, +80%, -20%
CT09	24794101	EL, 100 μ F, $\pm$ 20%, 16V
CT10	24436220	CD, 22pF
CT11	24794101	EL, 100 μ F, $\pm$ 20%, 16V
CT12	24590104	PF, 0.1 μ F
CT13	24794100	EL, 10 μ F, $\pm$ 20%, 16V
CT14	24794100	EL, 10 μ F, $\pm$ 20%, 16V

Location No.	Part No.	Description
CT16	24436220	CD, 22pF
CT17	24232103	CD, 0.01 μ F, +80%, -20%
CV01	24590473	PF, 0.047 μ F
CV02	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CV03	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CV04	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CV05	24232103	CD, 0.01 μ F, +80%, -20%
CV06	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CV08	24763102	EL, 1000 μ F, $\pm$ 20%, 16V
CV09	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CV10	24085970	EL, 10 μ F, $\pm$ 20%, 16V, Non-Polar
CV12	24232103	CD, 0.01 μ F, +80%, -20%
CV13	24232103	CD, 0.01 μ F, +80%, -20%
CV14	24474102	CD, 1000pF, $\pm$ 10%
CV15	24474102	CD, 1000pF, $\pm$ 10%
CV23	24666101	EL, 100 μ F, $\pm$ 20%, 16V
CV24	24232103	CD, 0.01 μ F, +80%, -20%
CV25	24763471	EL, 470 μ F, $\pm$ 20%, 16V
CV35	24212102	CD, 1000pF, $\pm$ 10%
CV36	24232103	CD, 0.01 μ F, +80%, -20%
CV37	24474102	CD, 1000pF, $\pm$ 10%
CV39	24666101	EL, 100 μ F, $\pm$ 20%, 16V
CV40	24232103	CD, 0.01 μ F, +80%, -20%
CV42	24206229	EL, 2.2 μ F, 50V
CV46	24212332	CD, 3300pF, $\pm$ 10%
CV47	24212332	CD, 3300pF, $\pm$ 10%
CV48	24212102	CD, 1000pF, $\pm$ 10%
CV49	24232103	CD, 0.01 μ F, +80%, -20%
CV50	24232103	CD, 0.01 μ F, +80%, -20%
CV65	24203101	EL, 100 μ F, $\pm$ 20%, 16V
CV68	24763471	EL, 470 μ F, $\pm$ 20%, 16V
CV71	24763471	EL, 470 μ F, $\pm$ 20%, 16V
CV72	24766101	PF, 0.1 μ F
CV73	24212103	CD, 0.01 μ F, $\pm$ 10%
CV77	24666100	EL, 10 μ F, $\pm$ 20%, 16V
CZ07	24206229	EL, 2.2 μ F, 50V
CZ08	24203100	EL, 10 μ F, $\pm$ 20%, 16V
CZ09	24436220	CD, 22pF
CZ10	24473180	CD, 18pF
CZ11	24473100	CD, 10pF
CZ12	24232103	CD, 0.01 μ F, +80%, -20%
CZ13	24092398	CD, 0.1 μ F, +80%, -20%
CZ14	24617816	EL, 10 μ F, $\pm$ 20%, 50V
CZ15	24232103	CD, 0.01 μ F, +80%, -20%
CZ16	24206478	EL, 0.47 μ F, 50V
CZ17	24232103	CD, 0.01 μ F, +80%, -20%
CZ19	24436181	CD, 180pF
CZ20	24538103	PF, 0.01 μ F
CZ21	24436390	CD, 39pF
CZ22	24617816	EL, 10 μ F, $\pm$ 20%, 50V
CZ23	24092398	CD, 0.1 μ F, +80%, -20%
CZ24	24092398	CD, 0.1 μ F, +80%, -20%
CZ25	24203101	EL, 100 μ F, $\pm$ 20%, 16V
CZ26	24232103	CD, 0.01 μ F, +80%, -20%
CZ28	24232103	CD, 0.01 μ F, +80%, -20%
CZ29	24092398	CD, 0.1 μ F, +80%, -20%
CZ30	24617816	EL, 10 μ F, $\pm$ 20%, 50V
CZ32	24436120	CD, 12pF
CZ33	24436120	CD, 12pF
CZ34	24473120	CD, 12pF
CZ35	24473120	CD, 12pF
CZ36	24232103	CD, 0.01 μ F, +80%, -20%
CZ37	24092398	CD, 0.1 μ F, +80%, -20%

Location No.	Part No.	Description
CZ38	24092398	CD, 0.1 μ F, +80%, -20%
CZ43	24232103	CD, 0.01 μ F, +80%, -20%
CZ45	24436100	CD, 10pF, $\pm$ 0.25pF
RESISTORS		
R101	24382223	OMF, 22k ohm, 1W
R201	24366681	CF, 680 ohm
R202	24366821	CF, 820 ohm
R204	24366104	CF, 100k ohm
R205	24366222	CF, 2200 ohm
R206	24366102	CF, 1k ohm
R207	24366101	CF, 100 ohm
R208(U902A)	24366101	CF, 100 ohm
R208(U903)	24366103	CF, 10k ohm
R209(U903)	24366103	CF, 10k ohm
R209(U902A)	24366101	CF, 100 ohm
R211	24366123	CF, 12k ohm
R212	24366472	CF, 4700 ohm
R213	24366122	CF, 1200 ohm
R214	24366222	CF, 2200 ohm
R215	24366102	CF, 1k ohm
R216	24366103	CF, 10k ohm
R217	24366102	CF, 1k ohm
R218	24367822	CF, 8200 ohm, $\pm$ 2%
R220	24366102	CF, 1k ohm
R221	24366102	CF, 1k ohm
R223	24366102	CF, 1k ohm
R224	24366271	CF, 270 ohm
R225	24366100	CF, 10 ohm
R226	24366223	CF, 22k ohm
R227(U903)	24367622	CF, 6200 ohm, $\pm$ 2%
R227(U902A)	24366223	CF, 22k ohm
R228	24366104	CF, 100k ohm
R233	24366120	CF, 12 ohm
R240	24366152	CF, 1500 ohm
R241	24366102	CF, 1k ohm
R301	24366102	CF, 1k ohm
R303	24321159	MF, 1.5 ohm, 1/2W
R304	24366393	CF, 39k ohm
R305	24322568	MF, 0.56 ohm, 1W
R306	24366823	CF, 82k ohm
R307	24366364	CF, 360k ohm
R310	24382331	OMF, 330 ohm, 1W
R311	24366392	CF, 3900 ohm
R312	24366153	CF, 15k ohm
R313	24366623	CF, 62k ohm
R314	24366105	CF, 1M ohm
R315	24366105	CF, 1M ohm
R316	24366154	CF, 150k ohm
R318	24366471	CF, 470 ohm
R319	24366471	CF, 470 ohm
R320	24366101	CF, 100 ohm
R321	24366101	CF, 100 ohm
R322	24366183	CF, 18k ohm
R323	24366562	CF, 5600 ohm
R324	24366101	CF, 100 ohm
R325	24366104	CF, 100k ohm
R326	24366204	CF, 200k ohm
R327	24339479	MF, 4.7 ohm, 2W
R329	24366223	CF, 22k ohm
R330	24366102	CF, 1k ohm
R331	24366104	CF, 100k ohm
R332	24366122	CF, 1200 ohm
R333	24366562	CF, 5600 ohm

Location No.	Part No.	Description
R336	24383331	OMF, 330 ohm, 2W
R341	24366153	CF, 15k ohm
R343	24366153	CF, 15k ohm
R370	24321109	MF, 1 ohm, 1/2W
R371	24366562	CF, 5600 ohm
R372	24366392	CF, 3900 ohm
R373	24366182	CF, 1800 ohm
R374	24366153	CF, 15k ohm
R401	24366391	CF, 390 ohm
R402	24366103	CF, 10k ohm
R403	24366302	CF, 3k ohm
R405	24553682	OMF, 6800 ohm, 1W
R407	24366103	CF, 10k ohm
R410	24366331	CF, 330 ohm
R411	24366331	CF, 330 ohm
R413	24366682	CF, 6800 ohm
R415	24553272	OMF, 2700 ohm, 1W
R416	24510562	Cement, 5600 ohm, 5W
R423	24366473	CF, 47k ohm
R424	24366222	CF, 2200 ohm
R425(U903)	24552332	OMF, 3300 ohm, 1/2W
R425(U902A)	24366223	CF, 22k ohm
R426(U903)	24366821	CF, 820 ohm
R426(U902A)	24366473	CF, 47k ohm
R427(U902A)	24366222	CF, 2200 ohm
R427(U903)	24366392	CF, 3900 ohm
R428(U903)	24366561	CF, 560 ohm
R428(U902A)	24366333	CF, 33k ohm
R429(U903)	24552560	OMF, 56 ohm, 1/2W
R429(U902A)	24366473	CF, 47k ohm
R431	24366103	CF, 10k ohm
△ R432	24531560	FR, 56 ohm, 1/2W
R433	24366472	CF, 4700 ohm
R434	24366332	CF, 3300 ohm
△ R441	24532102	FR, 1k ohm, 1W
△ R442	24533151	FR, 150 ohm, 2W
R460	24552332	OMF, 3300 ohm, 1/2W
R461	24552242	OMF, 2400 ohm, 1/2W
R463	24323479	OMF, 4.7 ohm, 2W
R464	24366273	CF, 27k ohm
R465	24366114	CF, 110k ohm
R466	24366562	CF, 5600 ohm
△ R469	24000211	FR, 15 ohm, 1/2W
R470	24338568	MF, 0.56 ohm, 1W
R471	24531271	FR, 270 ohm, 1/2W
R473	24366184	CF, 180k ohm
R474	24366184	CF, 180k ohm
R478	24376333	CF, 33k ohm, 1/2W
R479	24531121	FR, 120 ohm, 1/2W
R480	24552222	OMF, 2200 ohm, 1/2W
R481	24366223	CF, 22k ohm
R482	24366223	CF, 22k ohm
R487	24366474	CF, 470k ohm
R488	24366154	CF, 150k ohm
R501	24366223	CF, 22k ohm
R502	24366101	CF, 100 ohm
R503	24366101	CF, 100 ohm
R505	24366102	CF, 1k ohm
R506	24366103	CF, 10k ohm
R508	24366102	CF, 1k ohm
R509	24366102	CF, 1k ohm
R510	24366102	CF, 1k ohm
R511	24366101	CF, 100 ohm
R512	24366101	CF, 100 ohm

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Location No.	Part No.	Description
R610	24366103	CF, 10k ohm
R611	24366103	CF, 10k ohm
R612	24366103	CF, 10k ohm
R640	24366222	CF, 2200 ohm
R641	24366182	CF, 1800 ohm
R642	24366222	CF, 2200 ohm
R643	24366562	CF, 5600 ohm
R644	24366473	CF, 47k ohm
R645	24366229	CF, 2.2 ohm
R646	24366223	CF, 22k ohm
R647	24366223	CF, 22k ohm
R648	24366229	CF, 2.2 ohm
R660	24510159	Cement, 1.5 ohm, 5W
R661(U903)	24510159	Cement, 1.5 ohm, 5W
R661(U902A)	24552221	OMF, 220 ohm, 1/2W
R662	24552221	OMF, 220 ohm, 1/2W
R670	24366272	CF, 2700 ohm
R671(U904)	24366102	CF, 1k ohm
R671(U902A)	24366222	CF, 2200 ohm
R672(U902A)	24366272	CF, 2700 ohm
R672(U904)	24366102	CF, 1k ohm
R673(U904)	24366102	CF, 1k ohm
R673(U902A)	24366222	CF, 2200 ohm
R674	24366332	CF, 3300 ohm
R675(U902A)	24366472	CF, 4700 ohm
R675(U904)	24366102	CF, 1k ohm
R676(U902A)	24366223	CF, 22k ohm
R676(U904)	24366223	CF, 22k ohm
R677(U902A)	24366223	CF, 22k ohm
R677(U904)	24366223	CF, 22k ohm
R678	24366223	CF, 22k ohm
R679	24366223	CF, 22k ohm
R680(U902A)	24366473	CF, 47k ohm
R680(U904)	24366223	CF, 22k ohm
R681	24366223	CF, 22k ohm
R682	24366104	CF, 100k ohm
R683	24366273	CF, 27k ohm
R684	24366229	CF, 2.2 ohm
R685	24366229	CF, 2.2 ohm
R686	24366229	CF, 2.2 ohm
R688	24366222	CF, 2200 ohm
R690	24366681	CF, 680 ohm
R691	24366681	CF, 680 ohm
R692	24366681	CF, 680 ohm
R693	24366681	CF, 680 ohm
R702	24366222	CF, 2200 ohm
R709	24366563	CF, 56k ohm
R713	24366393	CF, 39k ohm
R714	24552121	OMF, 120 ohm, 1/2W
R715	24366223	CF, 22k ohm
R716	24366273	CF, 27k ohm
R717	24366333	CF, 33k ohm
R718	24366222	CF, 2200 ohm
R719	24366392	CF, 3900 ohm
R720	24366392	CF, 3900 ohm
R721	24366102	CF, 1k ohm
R722	24552471	OMF, 470 ohm, 1/2W
R723	24366471	CF, 470 ohm
R724	24366470	CF, 47 ohm
R725	24366182	CF, 1800 ohm
R730	24552100	OMF, 10 ohm, 1/2W
R731	24552331	OMF, 330 ohm, 1/2W
R732	24366820	CF, 82 ohm
R733	24366683	CF, 68k ohm

Location No.	Part No.	Description
R734	24366820	CF, 82 ohm
R735	24366683	CF, 68k ohm
R736	24552620	OMF, 62 ohm, 1/2W
R737	24366152	CF, 1500 ohm
R738	24366123	CF, 12k ohm
R739	24366152	CF, 1500 ohm
R740	24552620	OMF, 62 ohm, 1/2W
R741	24321279	MF, 2.7 ohm, 1/2W
R742	24321279	MF, 2.7 ohm, 1/2W
R743	24554221	OMF, 220 ohm, 2W
R744	24366122	CF, 1200 ohm
R745	24366122	CF, 1200 ohm
△R801	24009954	Metal-Glazed Resistor, 2.2M ohm, 1/2W
R803	24382683	OMF, 68k ohm, 1W
R805	24366101	CF, 100 ohm
R806	24552392	OMF, 3900 ohm, 1/2W
△R808	24019340	PTC Thermistor, 18 ohm, 290V
△R810	24007489	Cement, 3 ohm, 20W
△R811	24568271	Cement, 270 ohm, 7W
R814	24366122	CF, 1200 ohm
R815	24552102	OMF, 1k ohm, 1/2W
R816	24382100	OMF, 10 ohm, 1W
R818	24322228	MF, 0.22 ohm, 1W
R819	24321829	MF, 8.2 ohm, 1/2W
R821	24366101	CF, 100 ohm
R822	24552103	OMF, 10k ohm, 1/2W
R823	24366272	CF, 2700 ohm
△R824	24569689	Cement, 6.8 ohm, 10W
R827	24366681	CF, 680 ohm
R828	24366821	CF, 820 ohm
R829	24322228	MF, 0.22 ohm, 1W
R830	24366471	CF, 470 ohm
△R841	24531120	FR, 12 ohm, 1/2W
R842	24552392	OMF, 3900 ohm, 1/2W
R846	24366561	CF, 560 ohm
R847	24366472	CF, 4700 ohm
R871	24366101	CF, 100 ohm
R890	24553333	OMF, 33k ohm, 1W
△R899	24005007	Metal-Glazed Resistor, 8.2M ohm, 1W
R901	24376561	CF, 560 ohm, 1/2W
R902	24376561	CF, 560 ohm, 1/2W
R903	24376561	CF, 560 ohm, 1/2W
R904	24366472	CF, 4700 ohm
R905	24366150	CF, 15 ohm
R909	24366222	CF, 2200 ohm
R912	24366102	CF, 1k ohm
R914	24366561	CF, 560 ohm
R915	24366101	CF, 100 ohm
R916	24366510	CF, 51 ohm
R917	24366471	CF, 470 ohm
R918	24366820	CF, 82 ohm
R919	24366102	CF, 1k ohm
R920	24000568	FR, 4.7 ohm, 1W
R921	24366561	CF, 560 ohm
R922	24366101	CF, 100 ohm
R924	24366820	CF, 82 ohm
R925	24366471	CF, 470 ohm
R926	24366102	CF, 1k ohm
R928	24366561	CF, 560 ohm
R929	24366101	CF, 100 ohm
R930	24366820	CF, 82 ohm

Location No.	Part No.	Description
R932	24366332	CF, 3300 ohm
R933	24366750	CF, 75 ohm
R934	24366391	CF, 390 ohm
R935	24366821	CF, 820 ohm
R936	24366750	CF, 75 ohm
R937	24366471	CF, 470 ohm
R939	24366101	CF, 100 ohm
R942	24366392	CF, 3900 ohm
R943	24366392	CF, 3900 ohm
R944	24366392	CF, 3900 ohm
R945	24366510	CF, 51 ohm
R946	24366510	CF, 51 ohm
R960	24383153	OMF, 15k ohm, 2W
R961	24383153	OMF, 15k ohm, 2W
R962	24383153	OMF, 15k ohm, 2W
R963	24383153	OMF, 15k ohm, 2W
R964	24383153	OMF, 15k ohm, 2W
R965	24383153	OMF, 15k ohm, 2W
R977	24366122	CF, 1200 ohm
R980	24366471	CF, 470 ohm
R981	24366821	CF, 820 ohm
R982	24366103	CF, 10k ohm
R983	24366222	CF, 2200 ohm
R984	24367152	CF, 1500 ohm, $\pm 2\%$
R985	24367471	CF, 470 ohm, $\pm 2\%$
R986	24367681	CF, 680 ohm, $\pm 2\%$
R987	24367681	CF, 680 ohm, $\pm 2\%$
R988	24367472	CF, 4700 ohm, $\pm 2\%$
R989	24367332	CF, 3300 ohm, $\pm 2\%$
R990	24366242	CF, 2400 ohm
R991	24367681	CF, 680 ohm, $\pm 2\%$
R992	24366150	CF, 15 ohm
RA03	24366102	CF, 1k ohm
RA04	24366102	CF, 1k ohm
RA05	24366102	CF, 1k ohm
RA07	24366102	CF, 1k ohm
RA08	24366102	CF, 1k ohm
RA13	24366153	CF, 15k ohm
RA16	24366102	CF, 1k ohm
RA17	24366102	CF, 1k ohm
RA18	24366102	CF, 1k ohm
RA22	24366472	CF, 4700 ohm
RA23	24366472	CF, 4700 ohm
RA24	24366472	CF, 4700 ohm
RA25	24366332	CF, 3300 ohm
RA26	24366102	CF, 1k ohm
RA27	24366102	CF, 1k ohm
RA33	24366103	CF, 10k ohm
RA35	24366102	CF, 1k ohm
RA36	24366472	CF, 4700 ohm
RA37	24366101	CF, 100 ohm
RA38	24366101	CF, 100 ohm
RA61	24366103	CF, 10k ohm
RA62	24366103	CF, 10k ohm
RA67	24366272	CF, 2700 ohm
RA68	24366272	CF, 2700 ohm
RA70	24366333	CF, 33k ohm
RA71	24366683	CF, 68k ohm
RA72	24366223	CF, 22k ohm
RA73	24366103	CF, 10k ohm
RA75	24366333	CF, 33k ohm
RA76	24366103	CF, 10k ohm
RB01	24366271	CF, 270 ohm
RB02	24366271	CF, 270 ohm

Location No.	Part No.	Description
RB03	24366101	CF, 100 ohm
RB09	24366470	CF, 47 ohm
RB10	24366101	CF, 100 ohm
RB11	24366103	CF, 10k ohm
RB30	24366103	CF, 10k ohm
RB40	24366103	CF, 10k ohm
RB41	24366182	CF, 1800 ohm
RB42	24366102	CF, 1k ohm
RB43	24366103	CF, 10k ohm
RB44	24366103	CF, 10k ohm
RB45	24366101	CF, 100 ohm
RD01	24872101	Chip, 100 ohm, 1/16W
RD02	24872101	Chip, 100 ohm, 1/16W
RD03	24872101	Chip, 100 ohm, 1/16W
RD04	24872101	Chip, 100 ohm, 1/16W
RD05	24872104	Chip, 100k ohm, 1/16W
RD06	24872272	Chip, 2700 ohm, 1/16W
RD07	24872104	Chip, 100k ohm, 1/16W
RD08	24872272	Chip, 2700 ohm, 1/16W
RD09	24872104	Chip, 100k ohm, 1/16W
RD10	24872104	Chip, 100k ohm, 1/16W
RD11	24872272	Chip, 2700 ohm, 1/16W
RD12	24872562	Chip, 5600 ohm, 1/16W
RD13	24872103	Chip, 10k ohm, 1/16W
RD14	24872104	Chip, 100k ohm, 1/16W
RD15	24872222	Chip, 2200 ohm, 1/16W
RD16	24872103	Chip, 10k ohm, 1/16W
RD17	24872222	Chip, 2200 ohm, 1/16W
RD18	24872123	Chip, 12k ohm, 1/16W
RD19	24872822	Chip, 8200 ohm, 1/16W
RD20	24872105	Chip, 1M ohm, 1/16W
RD21	24872822	Chip, 8200 ohm, 1/16W
RD22	24872822	Chip, 8200 ohm, 1/16W
RD23	24872101	Chip, 100 ohm, 1/16W
RD24	24872562	Chip, 5600 ohm, 1/16W
RD25	24872272	Chip, 2700 ohm, 1/16W
RD26	24872822	Chip, 8200 ohm, 1/16W
RD27	24872822	Chip, 8200 ohm, 1/16W
RD28	24872103	Chip, 10k ohm, 1/16W
RD29	24872103	Chip, 10k ohm, 1/16W
RD30	24872822	Chip, 8200 ohm, 1/16W
RD31	24872101	Chip, 100 ohm, 1/16W
RD32	24872473	Chip, 47k ohm, 1/16W
RD33	24872205	Chip, 2M ohm, 1/16W
RD34	24872822	Chip, 8200 ohm, 1/16W
RD35	24872822	Chip, 8200 ohm, 1/16W
RD36	24872822	Chip, 8200 ohm, 1/16W
RD37	24000593	Chip, 10k ohm, $\pm 1\%$, 1/16W
RD38	24872912	Chip, 9100 ohm, 1/16W
RD39	24872562	Chip, 5600 ohm, 1/16W
RD40	24872104	Chip, 100k ohm, 1/16W
RD41	24872104	Chip, 100k ohm, 1/16W
RD42	24000593	Chip, 10k ohm, $\pm 1\%$, 1/16W
RD43	24000593	Chip, 10k ohm, $\pm 1\%$, 1/16W
RD44	24000593	Chip, 10k ohm, $\pm 1\%$, 1/16W
RD45	24872103	Chip, 10k ohm, 1/16W
RD46	24872183	Chip, 18k ohm, 1/16W
RD47	24872912	Chip, 9100 ohm, 1/16W
RD48	24872362	Chip, 3600 ohm, 1/16W
RD49	24872103	Chip, 10k ohm, 1/16W
RD50	24872203	Chip, 20k ohm, 1/16W
RD51	24872472	Chip, 4700 ohm, 1/16W
RD52	24872104	Chip, 100k ohm, 1/16W
RD53	24872123	Chip, 12k ohm, 1/16W

Location No.	Part No.	Description
RD54	24872103	Chip, 10k ohm, 1/16W
RD55	24872153	Chip, 15k ohm, 1/16W
RD56	24872392	Chip, 3900 ohm, 1/16W
RD57	24872153	Chip, 15k ohm, 1/16W
RD58	24872562	Chip, 5600 ohm, 1/16W
RD59	24872123	Chip, 12k ohm, 1/16W
RD60	24872103	Chip, 10k ohm, 1/16W
RD61	24872105	Chip, 1M ohm, 1/16W
RD64	24872103	Chip, 10k ohm, 1/16W
RD65	24872101	Chip, 100 ohm, 1/16W
RD66	24871222	Chip, 2200 ohm, 1/8W
RD67	24871182	Chip, 1800 ohm, 1/8W
RD68	24872101	Chip, 100 ohm, 1/16W
RD69	24871105	Chip, 1M ohm, 1/8W
RD70	24872103	Chip, 10k ohm, 1/16W
RD71	24872102	Chip, 1k ohm, 1/16W
RD73	24872102	Chip, 1k ohm, 1/16W
RD74	24872102	Chip, 1k ohm, 1/16W
RD77	24872153	Chip, 15k ohm, 1/16W
RD78	24872103	Chip, 10k ohm, 1/16W
RD79	24872101	Chip, 100 ohm, 1/16W
RD80	24872101	Chip, 100 ohm, 1/16W
RD81	24872101	Chip, 100 ohm, 1/16W
RD82	24872101	Chip, 100 ohm, 1/16W
RG01	24366223	CF, 22k ohm
RG02	24366223	CF, 22k ohm
RG03	24366101	CF, 100 ohm
RG04	24366101	CF, 100 ohm
RG05	24366101	CF, 100 ohm
RG06	24366101	CF, 100 ohm
RG07	24366101	CF, 100 ohm
RG08	24366101	CF, 100 ohm
RG09	24366123	CF, 12k ohm
RG10	24366303	CF, 30k ohm
RG11	24366123	CF, 12k ohm
RG12	24366303	CF, 30k ohm
RQ07	24366103	CF, 10k ohm
RQ08	24366102	CF, 1k ohm
RQ09	24366102	CF, 1k ohm
RQ10	24366102	CF, 1k ohm
RQ11	24366561	CF, 560 ohm
RQ12	24366561	CF, 560 ohm
RR01	24366472	CF, 4700 ohm
RR02	24366472	CF, 4700 ohm
RR03	24366472	CF, 4700 ohm
RR10	24366103	CF, 10k ohm
RR11	24366223	CF, 22k ohm
RR12	24366223	CF, 22k ohm
RR17	24366102	CF, 1k ohm
RR18	24366102	CF, 1k ohm
RR20	24366472	CF, 4700 ohm
RR21	24366103	CF, 10k ohm
RR22	24366473	CF, 47k ohm
RR23	24366101	CF, 100 ohm
RR24	24366101	CF, 100 ohm
RR25	24366101	CF, 100 ohm
RR26	24366101	CF, 100 ohm
RR27	24366473	CF, 47k ohm
RR28	24366473	CF, 47k ohm
RR29	24366473	CF, 47k ohm
RR30	24366472	CF, 4700 ohm
RR31	24366471	CF, 470 ohm
RR33	24366102	CF, 1k ohm
RR34	24366102	CF, 1k ohm

Location No.	Part No.	Description
RR35	24366102	CF, 1k ohm
RR36	24366682	CF, 6800 ohm
RR37	24366682	CF, 6800 ohm
RR38	24366682	CF, 6800 ohm
RR93	24366472	CF, 4700 ohm
RS01	24366681	CF, 680 ohm
RS02	24366681	CF, 680 ohm
RS03	24366101	CF, 100 ohm
RS04	24366101	CF, 100 ohm
RS05	24366472	CF, 4700 ohm
RS06	24366472	CF, 4700 ohm
RS07	24366472	CF, 4700 ohm
RS08	24366472	CF, 4700 ohm
RS09	24366472	CF, 4700 ohm
RS10	24366472	CF, 4700 ohm
RS11	24366101	CF, 100 ohm
RS13	24366101	CF, 100 ohm
RS14	24366101	CF, 100 ohm
RS15	24366104	CF, 100k ohm
RS16	24366104	CF, 100k ohm
RS17	24366223	CF, 22k ohm
RS18	24366223	CF, 22k ohm
RS19	24366102	CF, 1k ohm
RS20	24366102	CF, 1k ohm
RS21	24366222	CF, 2200 ohm
RS22	24366222	CF, 2200 ohm
RS23	24366101	CF, 100 ohm
RS24	24366101	CF, 100 ohm
RS27	24366104	CF, 100k ohm
RS28	24366104	CF, 100k ohm
RS29	24366223	CF, 22k ohm
RS30	24366223	CF, 22k ohm
RS31	24366103	CF, 10k ohm
RS32	24366104	CF, 100k ohm
RS35	24366223	CF, 22k ohm
RS36	24366223	CF, 22k ohm
RS37	24366104	CF, 100k ohm
RS38	24366104	CF, 100k ohm
RS43	24366681	CF, 680 ohm
RS44	24366681	CF, 680 ohm
RS45	24366681	CF, 680 ohm
RS46	24366681	CF, 680 ohm
RT01	24366332	CF, 3300 ohm
RT02	24366102	CF, 1k ohm
RT03	24366101	CF, 100 ohm
RT04	24366273	CF, 27k ohm
RT05	24366103	CF, 10k ohm
RT06	24366103	CF, 10k ohm
RT07	24366102	CF, 1k ohm
RT08	24366103	CF, 10k ohm
RT09	24366101	CF, 100 ohm
RT10	24366472	CF, 4700 ohm
RT11	24366392	CF, 3900 ohm
RT12	24366682	CF, 6800 ohm
RT13	24366103	CF, 10k ohm
RT14	24366222	CF, 2200 ohm
RT15	24366101	CF, 100 ohm
RT16	24366101	CF, 100 ohm
RT17	24366102	CF, 1k ohm
RT18	24366152	CF, 1500 ohm
RT19	24366122	CF, 1200 ohm
RT20	24366471	CF, 470 ohm
RT22	24366271	CF, 270 ohm
RT23	24366821	CF, 820 ohm

Location No.	Part No.	Description
RV01	24366101	CF, 100 ohm
RV02	24366101	CF, 100 ohm
RV03	24366101	CF, 100 ohm
RV04	24366101	CF, 100 ohm
RV05	24366101	CF, 100 ohm
RV06	24366101	CF, 100 ohm
RV07	24366162	CF, 1600 ohm
RV08	24366162	CF, 1600 ohm
RV09	24366101	CF, 100 ohm
RV10	24366101	CF, 100 ohm
RV11	24366101	CF, 100 ohm
RV18	24366123	CF, 12k ohm
RV19	24366101	CF, 100 ohm
RV20	24366101	CF, 100 ohm
RV21	24366221	CF, 220 ohm
RV22	24366680	CF, 68 ohm
RV23	24552101	OMF, 100 ohm, 1/2W
RV25	24366101	CF, 100 ohm
RV26	24366181	CF, 180 ohm
RV27	24366750	CF, 75 ohm
RV30	24366750	CF, 75 ohm
RV31	24366103	CF, 10k ohm
RV32	24366750	CF, 75 ohm
RV33	24366123	CF, 12k ohm
RV34	24366123	CF, 12k ohm
RV35	24366103	CF, 10k ohm
RV36	24366103	CF, 10k ohm
RV37	24366104	CF, 100k ohm
RV38	24366224	CF, 220k ohm
RV39	24366104	CF, 100k ohm
RV41	24366104	CF, 100k ohm
RV42	24366471	CF, 470 ohm
RV43	24366471	CF, 470 ohm
RV44	24366471	CF, 470 ohm
RV45	24366100	CF, 10 ohm
RV46	24366112	CF, 1100 ohm
RV47	24366102	CF, 1k ohm
RV48	24366102	CF, 1k ohm
RV49	24366102	CF, 1k ohm
RV52	24552101	OMF, 100 ohm, 1/2W
RV60	24366102	CF, 1k ohm
RV61	24366471	CF, 470 ohm
RV62	24366471	CF, 470 ohm
RV65	24552101	OMF, 100 ohm, 1/2W
RV66	24366101	CF, 100 ohm
RV67	24552820	OMF, 82 ohm, 1/2W
RV68	24366750	CF, 75 ohm
RV71	24366750	CF, 75 ohm
RV73	24366181	CF, 180 ohm
RV74	24366101	CF, 100 ohm
RV75	24366332	CF, 3300 ohm
RV76	24366220	CF, 22 ohm
RV77	24366182	CF, 1800 ohm
RV80	24366681	CF, 680 ohm
RV81(U902A)	24366681	CF, 680 ohm
RV81(U904)	24366750	CF, 75 ohm
RV82	24366220	CF, 22 ohm
RV83	24366220	CF, 22 ohm
RV84	24366220	CF, 22 ohm
RV85(U902A)	24366750	CF, 75 ohm
RV85(U904)	24366510	CF, 51 ohm
RV86(U902A)	24366103	CF, 10k ohm
RV86(U904)	24366510	CF, 51 ohm
RV87(U904)	24366510	CF, 51 ohm

Location No.	Part No.	Description
RV87(U902A)	24366750	CF, 75 ohm
RV89	24366750	CF, 75 ohm
RV90	24366681	CF, 680 ohm
RV91	24366681	CF, 680 ohm
RZ01	24366471	CF, 470 ohm
RZ02	24366152	CF, 1500 ohm
RZ04	24366332	CF, 3300 ohm
RZ05	24366332	CF, 3300 ohm
RZ06	24366821	CF, 820 ohm
RZ07	24366822	CF, 8200 ohm
RZ08	24366332	CF, 3300 ohm
RZ12	24366471	CF, 470 ohm
RZ14	24366123	CF, 12k ohm
RZ15	24366392	CF, 3900 ohm
RZ16	24366122	CF, 1200 ohm
RZ17	24366331	CF, 330 ohm
RZ18	24366821	CF, 820 ohm
RZ19	24366471	CF, 470 ohm
RZ20	24366122	CF, 1200 ohm
RZ21	24366680	CF, 68 ohm
RZ22	24366101	CF, 100 ohm
RZ23	24366821	CF, 820 ohm
RZ24	24366821	CF, 820 ohm
RZ25	24366101	CF, 100 ohm
RZ26	24366101	CF, 100 ohm
RZ28	24366564	CF, 560k ohm
RZ29	24366331	CF, 330 ohm
RZ30	24366331	CF, 330 ohm
RZ31	24366102	CF, 1k ohm

COILS & TRANSFORMERS

L201	23289150	Coil, Peaking, TRF4150AF
L301	23103859	Coil (Ferrite Bead), TEM2011
L302	23237975	Coil, Peaking, TRF4101AC
L400	23289100	Coil, Peaking, TRF4100AF
L441	23233947	Coil, Linearity, TLN2144G
L442	23248117	Coil, Choke, TLN3382D
L443	23221684	Coil, Choke, TLN3191D
L461	23221896	Coil, Choke, TLN3061
△L462	-----	DY, Supplied with V901
L463	23103859	Coil (Ferrite Bead), TEM2011
L491	23248116	Coil, Choke, TLN3368D
L501	23289479	Coil, Peaking, TRF44R7AF
L503	23289470	Coil, Peaking, TRF4470AF
L601	23103859	Coil (Ferrite Bead), TEM2011
L602	23103859	Coil (Ferrite Bead), TEM2011
L676	23289109	Coil, Peaking, TRF41R0AF
L677	23289109	Coil, Peaking, TRF41R0AF
L682	23238562	Coil, Peaking, TRF4109AJ
L683	23238562	Coil, Peaking, TRF4109AJ
L702	23261974	Coil, Choke, HC5-035
L704	23103859	Coil (Ferrite Bead), TEM2011
L705	23103859	Coil (Ferrite Bead), TEM2011
L810	23103941	Coil (Ferrite Bead), TEM2000
L811	23103859	Coil (Ferrite Bead), TEM2011
L883	23221747	Coil, Choke, TRF9253D
L885	23248073	Coil, Choke, TLN3299D
L886	23103859	Coil (Ferrite Bead), TEM2011
L889	23222694	Coil, Width, TLN2026
L891	23103859	Coil (Ferrite Bead), TEM2011
L892	23103859	Coil (Ferrite Bead), TEM2011
L893	23222694	Coil, Width, TLN2026
L896	23103859	Coil (Ferrite Bead), TEM2011
△L901	23200276	Coil, Degaussing, TSB-2330BR

Location No.	Part No.	Description
L902	23289101	Coil, Peaking, TRF4101AF
L903	23289101	Coil, Peaking, TRF4101AF
L904	23289101	Coil, Peaking, TRF4101AF
L905	23289390	Coil, Peaking, TRF4390AF
L906	23289390	Coil, Peaking, TRF4390AF
L907	23289390	Coil, Peaking, TRF4390AF
L908	23289100	Coil, Peaking, TRF4100AF
L910	23289479	Coil, Peaking, TRF4479AF
LA01	23289100	Coil, Peaking, TRF4100AF
LB01	23262996	Coil, IF, TRF1169D
LD01	23103859	Coil (Ferrite Bead), TEM2011
LD02	23238714	Coil, Peaking, TRF4100AJ
LG41	23237999	Coil, Peaking, TRF4109AC
LQ03	23238718	Coil, Peaking, TRF4479AJ
LQ04	23238718	Coil, Peaking, TRF4479AJ
LT01	23289339	Coil, Peaking, TRF43R3AF
LT02	23238562	Coil, Peaking, TRF4109AJ
LT03	23289150	Coil, Peaking, TRF4150AF
LT04	23238714	Coil, Peaking, TRF4100AJ
LT05	23238714	Coil, Peaking, TRF4100AJ
LT06	23238714	Coil, Peaking, TRF4100AJ
LT07	23238714	Coil, Peaking, TRF4100AJ
LT08	23103859	Coil (Ferrite Bead), TEM2011
LT09	23238714	Coil, Peaking, TRF4100AJ
LT10	23238506	Coil, Peaking, TRF4229AJ
LT11	23238714	Coil, Peaking, TRF4100AJ
LT12	23238506	Coil, Peaking, TRF4229AJ
LT13	23238506	Coil, Peaking, TRF4229AJ
LV01	23103824	Coil, TEM2028K
LV37	23289150	Coil, Peaking, TRF4150AF
LV42	23289100	Coil, Peaking, TRF4100AF
LV43	23289100	Coil, Peaking, TRF4100AF
LV48	23238705	Coil, Peaking, TRF4560AJ
LZ01	23238712	Coil, Peaking, TRF4150AJ
LZ02	23238716	Coil, Peaking, TRF4689AJ
LZ03	23238716	Coil, Peaking, TRF4689AJ
LZ04	23238709	Coil, Peaking, TRF4270AJ
LZ05	23238716	Coil, Peaking, TRF4689AJ
LZ06	23238709	Coil, Peaking, TRF4270AJ
LZ07	23238709	Coil, Peaking, TRF4270AJ
LZ08	23238707	Coil, Peaking, TRF4390AJ
LZ09	70131060	Filter, ZBF253D-00
LZ10	70131060	Filter, ZBF253D-00
LZ11	23238709	Coil, Peaking, TRF4270AJ
△T401	23224336	Transformer, Horiz. Drive, TLN1083
△T461	23236447	Transformer, Flyback, TFB4115AR
△T801	23211891	Line Filter, TRF3164
△T803	23217301	Transformer, Converter, TPW3336AR
SEMICONDUCTORS		
Q200	A6330059	Transistor, 2SC2482(C)
Q201	23314794	Transistor, 2PC1815Y
Q202	A6342206	Transistor, 2SC2878-A(TE)
Q203	A6734590	Transistor, 2SC752(G)TM-Y
Q204	23314794	Transistor, 2PC1815Y
Q205	23314794	Transistor, 2PC1815Y
Q301	B0378560	IC, TA8427K
Q302	B0384683	IC, TA8859AP
Q320	23314791	Transistor, 2PA1015Y
Q321	A6342206	Transistor, 2SC2878-A(TE)
Q322	A6342206	Transistor, 2SC2878-A(TE)

Location No.	Part No.	Description
Q370	23314791	Transistor, 2PA1015Y
Q402	A678971D	Transistor, 2SC1569 FA-5
△Q404	A6872801	Transistor, 2SD2253(FA)
Q420(U902A)	A6002040	Transistor, RN1204
Q420(U903)	23314141	Transistor, 2SC3852
Q421(U902A)	A6002040	Transistor, RN1204
Q421(U903)	23314794	Transistor, 2PC1815Y
Q422	A6012030	Transistor, RN2203
Q423	23314794	Transistor, 2PC1815Y
Q424	23314794	Transistor, 2PC1815Y
Q425	A6002040	Transistor, RN1204
Q430	A6333346	Transistor, 2SC2655-Y(C)
Q460	23314850	Transistor, 2SA1788-E
Q461	23314794	Transistor, 2PC1815Y
Q462	23314794	Transistor, 2PC1815Y
Q470	23314794	Transistor, 2PC1815Y
Q501	B0385673	IC, TA1222AN
Q502	23314794	Transistor, 2PC1815Y
Q503	23314794	Transistor, 2PC1815Y
Q611	23314791	Transistor, 2PA1015Y
Q612	23314791	Transistor, 2PA1015Y
Q641	A6342206	Transistor, 2SC2878-A(TE)
Q640	B0376856	IC, TA8211AH
Q642	A6342206	Transistor, 2SC2878-A(TE)
Q670	B0377307	IC, TA8256H
Q671	A6342206	Transistor, 2SC2878-A(TE)
Q672	A6342206	Transistor, 2SC2878-A(TE)
Q673	A6342206	Transistor, 2SC2878-A(TE)
Q688	A6002040	Transistor, RN1204
Q705	23314794	Transistor, 2PC1815Y
Q706	23314794	Transistor, 2PC1815Y
Q707	A6734590	Transistor, 2SC752(G)TM-Y
Q709	23314794	Transistor, 2PC1815Y
Q710	23314791	Transistor, 2PA1015Y
Q711	A6546665	Transistor, 2SA1306-Y
Q712	A6359135	Transistor, 2SC3298A-Y
Q719	23314794	Transistor, 2PC1815Y
Q720	23314794	Transistor, 2PC1815Y
△Q801	23905084	IC, STR-S6709
Q802	23314141	Transistor, 2SC3852
△Q826	A8643106	Photo Coupler, TLP621(GR)
Q830	23314141	Transistor, 2SC3852
Q840	23318299	IC, L78MR05
Q901	23314811	Transistor, 2SC5147
Q902	23314794	Transistor, 2PC1815Y
Q903	23314811	Transistor, 2SC5147
Q904	23314794	Transistor, 2PC1815Y
Q905	23314811	Transistor, 2SC5147
Q906	23314794	Transistor, 2PC1815Y
Q907	A6509154	Transistor, 2SA562TM-Y(T)
Q908	A6321240	Transistor, 2SC2120-Y
Q910	23314794	Transistor, 2PC1815Y
Q911	23314794	Transistor, 2PC1815Y
Q912	23314791	Transistor, 2PA1015Y
Q913	23314791	Transistor, 2PA1015Y
Q914	23314794	Transistor, 2PC1815Y
QA02	23904666	IC, NM24C08EN
QB01	23314794	Transistor, 2PC1815Y
QB03	A6002050	Transistor, RN1205
QB30	23314794	Transistor, 2PC1815Y
QD01	23905042	IC, YSS215-F
QD02	B0478127	IC, TC51832AFL-8
QD03	23905041	IC, YSS238-D
QD04	B0470534	IC, TC4053BF

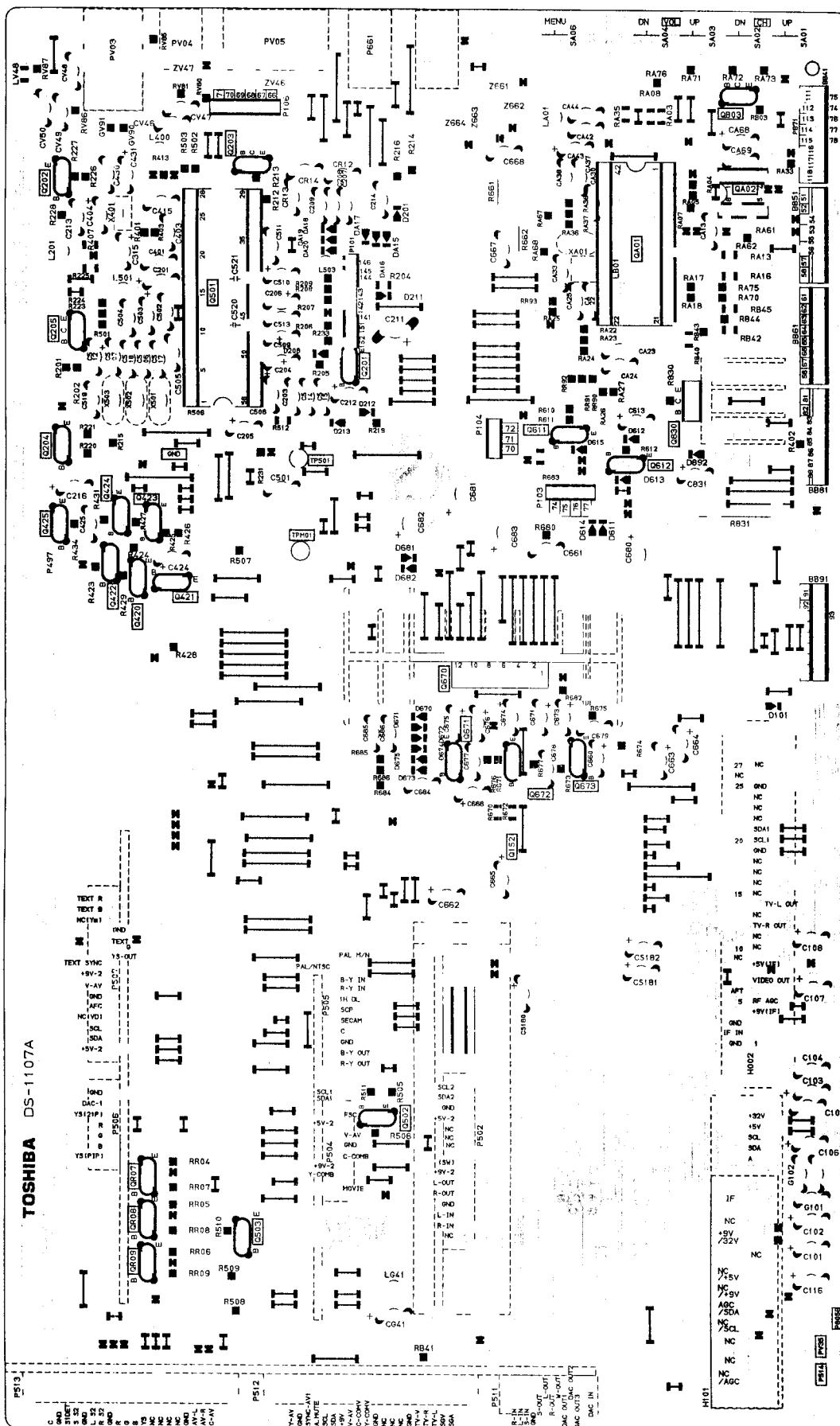
Location No.	Part No.	Description
QD05	B0345640	IC, TA7508F
QD06	B0345640	IC, TA7508F
QD07	B0345640	IC, TA7508F
QD08	B0470534	IC, TC4053BF
QD10	B0345640	IC, TA7508F
QD11	B0350020	IC, TA75458F
QD12	B0385640	IC, TA1216N
QG01	B0385645	IC, TA1217N
QQ02	B0383881	IC, TA8772AN
QQ03	23314794	Transistor, 2PC1815Y
QQ04	23314794	Transistor, 2PC1815Y
QR01	B0487584	IC, TC74HC4053AP
QR04	23314791	Transistor, 2PA1015Y
QR05	23314791	Transistor, 2PA1015Y
QR06	23314791	Transistor, 2PA1015Y
QR17	23314794	Transistor, 2PC1815Y
QR19	A6734590	Transistor, 2SC752(G)TM-Y
QR20	23314794	Transistor, 2PC1815Y
QR21	23314794	Transistor, 2PC1815Y
QR22	A6734590	Transistor, 2SC752(G)TM-Y
QS01	A6342206	Transistor, 2SC2878-A(TE
QS02	A6342206	Transistor, 2SC2878-A(TE
QS03	A6342206	Transistor, 2SC2878-A(TE
QS04	A6342206	Transistor, 2SC2878-A(TE
QS05	A6342206	Transistor, 2SC2878-A(TE
QS06	A6342206	Transistor, 2SC2878-A(TE
QS07	A6010040	Transistor, RN2004
QS08	A6342206	Transistor, 2SC2878-A(TE
QS09	A6342206	Transistor, 2SC2878-A(TE
QT01	23904899	IC, SAA5281ZP/E
QT02	23314794	Transistor, 2PC1815Y
QT03	23314794	Transistor, 2PC1815Y
QT04	23314791	Transistor, 2PA1015Y
QT05	23314794	Transistor, 2PC1815Y
QT06	23314791	Transistor, 2PA1015Y
QV01	B0385650	IC, TA1218N
QV02	23314794	Transistor, 2PC1815Y
QV03	23314794	Transistor, 2PC1815Y
QV04	23314794	Transistor, 2PC1815Y
QV05	23314791	Transistor, 2PA1015Y
QV06	23314791	Transistor, 2PA1015Y
QV09	23314794	Transistor, 2PC1815Y
QV10	23314794	Transistor, 2PC1815Y
QV11	A6002030	Transistor, RN1203
QV12	23314794	Transistor, 2PC1815Y
QV13	23314794	Transistor, 2PC1815Y
QZ01	B0410687	IC, TC9090N
QZ02	23319504	IC, MM1031XS
QZ03	23314794	Transistor, 2PC1815Y
QZ04	23314794	Transistor, 2PC1815Y
QZ05	23314794	Transistor, 2PC1815Y
QZ06	23314794	Transistor, 2PC1815Y
D101	23316411	Diode, 1SS184
D201	23115599	Diode, 1N4148
D208	23115599	Diode, 1N4148
D301	23118095	Diode, ERB44-06
D302	23118479	Diode, BYD33J
D303	23316794	Diode, SC570A
D306	23115599	Diode, 1N4148
D308	23118822	Diode, ERB12-02
D309	23118822	Diode, ERB12-02
D370	23316666	Diode, Zener, MTZJ4.7B
D371	23115599	Diode, 1N4148
D390	23115599	Diode, 1N4148

Location No.	Part No.	Description
D406	23118479	Diode, BYD33J
D420	23316680	Diode, Zener, MTZJ7.5A
D430	23316670	Diode, Zener, MTZJ5.1C
D431	23115599	Diode, 1N4148
D432	23316670	Diode, Zener, MTZJ5.1C
D441	23316687	Diode, Zener, MTZJ9.1B
D460	23118479	Diode, BYD33J
D461	23316582	Diode, ERC20-06
D463	23115599	Diode, 1N4148
D464	23316718	Diode, Zener, MTZJ12A
D465	23316672	Diode, Zener, MTZJ5.6B
D466	23316672	Diode, Zener, MTZJ5.6B
D467	23118479	Diode, BYD33J
D468	23316718	Diode, Zener, MTZJ12A
D474	23316719	Diode, Zener, MTZJ12B
D611	23115599	Diode, 1N4148
D612	23115599	Diode, 1N4148
D613	23115599	Diode, 1N4148
D614	23115599	Diode, 1N4148
D615	23115599	Diode, 1N4148
D640	23115599	Diode, 1N4148
D641	23115599	Diode, 1N4148
D642	23115599	Diode, 1N4148
D643	23115599	Diode, 1N4148
D670	23115599	Diode, 1N4148
D671	23115599	Diode, 1N4148
D674	23115599	Diode, 1N4148
D675	23115599	Diode, 1N4148
D704	23115599	Diode, 1N4148
D705	23115599	Diode, 1N4148
D706	A7568475	Diode, TVR-2D
D707	A7568475	Diode, TVR-2D
D715	23115599	Diode, 1N4148
D720	23115599	Diode, 1N4148
D721	23115599	Diode, 1N4148
△D801	23316795	Diode, D6SB60L,F05
D802	23118479	Diode, BYD33J
D803	23118479	Diode, BYD33J
D804	23316678	Diode, Zener, MTZJ6.8B
D805	23115599	Diode, 1N4148
D806	23118479	Diode, BYD33J
D808	23118479	Diode, BYD33J
D809	23316672	Diode, Zener, MTZJ5.6B
D810	23115599	Diode, 1N4148
D811	23115599	Diode, 1N4148
D815	23316725	Diode, Zener, MTZJ15B
D828	23115599	Diode, 1N4148
D871	23115599	Diode, 1N4148
D872	23115599	Diode, 1N4148
D883	23316406	Diode, FML-G16S
D885	23316184	Diode, FML-G12S
D891	23118052	Diode, RU4Z
D892(U902A)	23316673	Diode, Zener, MTZJ5,6C
D892(U903)	23118052	Diode, RU4Z
D896	23118479	Diode, BYD33J
D901	23115599	Diode, 1N4148
D903	23115599	Diode, 1N4148
D904	23115599	Diode, 1N4148
D905	23115599	Diode, 1N4148
D906	23115599	Diode, 1N4148
D907	23115599	Diode, 1N4148
D908	23115599	Diode, 1N4148
D909	23115599	Diode, 1N4148
D910	23115599	Diode, 1N4148

Location No.	Part No.	Description
D911	23118479	Diode, BYD33J
DB01	23358505	LED, SLR56VC196F
DB02	23358503	LED, SCL003MC3FX
DB03	23358522	LED, SIR-56SB3F
DB30	23115599	Diode, 1N4148
DD01	A7150650	Diode, 1SS184
DD02	A7150650	Diode, 1SS184
DD03	A7150650	Diode, 1SS184
DR01	23115599	Diode, 1N4148
DR02	23115599	Diode, 1N4148
DR03	23316666	Diode, Zener, MTZJ4.7B
DR04	23115599	Diode, 1N4148
DR05	23115599	Diode, 1N4148
DR06	23115599	Diode, 1N4148
DV01	23316687	Diode, Zener, MTZJ9.1B
DV02	23316687	Diode, Zener, MTZJ9.1B
DV03	23316687	Diode, Zener, MTZJ9.1B
DV04	23316687	Diode, Zener, MTZJ9.1B
DV05	23316687	Diode, Zener, MTZJ9.1B
DV06	23316687	Diode, Zener, MTZJ9.1B
DV07	23316687	Diode, Zener, MTZJ9.1B
DV08	23115599	Diode, 1N4148
DV09	23115599	Diode, 1N4148
DV10	23115599	Diode, 1N4148
DV11	23115599	Diode, 1N4148
DZ01	23118622	Diode, Zener, RD10ESA B2
MISCELLANEOUS		
△ F470	23144873	Fuse, 1.0A
F470A	23165433	Holder, Fuse
F470B	23165433	Holder, Fuse
△ F801	23144898	Fuse, 3.15A
F801A	23165433	Holder, Fuse
H002	23148249	Module, IF/NICAM, MVGS43A
KB01	23904946	Remote Sensor, RPM-676CBR-S
P004	23161702	Terminal, 8P
P005	23161596	Terminal, 2P
P661	23363607	Headphone Jack, 3.5mm
△ P801	23372012	Power Cord
PV01	23365843	Jack, 1S 6P
PV03	23365546	Jack, 2C-2P
PV04	23363252	Pin Jack, Yellow
PV05	23365508	Jack, Phono
S601	23145355	Switch, Slide, 4C-2P
SA01	23145430	Switch, Push, 1C1P
SA02	23145430	Switch, Push, 1C1P
SA03	23145430	Switch, Push, 1C1P
SA04	23145430	Switch, Push, 1C1P
SA06	23145430	Switch, Push, 1C1P
△ V901A	23902891	Socket, CRT, 10P
W008	23351002	Speaker, SPK-1276, 80x80mm, 8 ohm
W661	23351116	Speaker, SPK-1382, 60x120mm, 8 ohm
W662	23351116	Speaker, SPK-1382, 60x120mm, 8 ohm
W665	23351080	Speaker, SPK-1352, 100x100mm, 6 ohm
X401	23153721	Ceramic Resonator, 503kHz, TCR1023
X501	23153961	Crystal, 3.58MHz
X503	23153979	Crystal, 4.43MHz

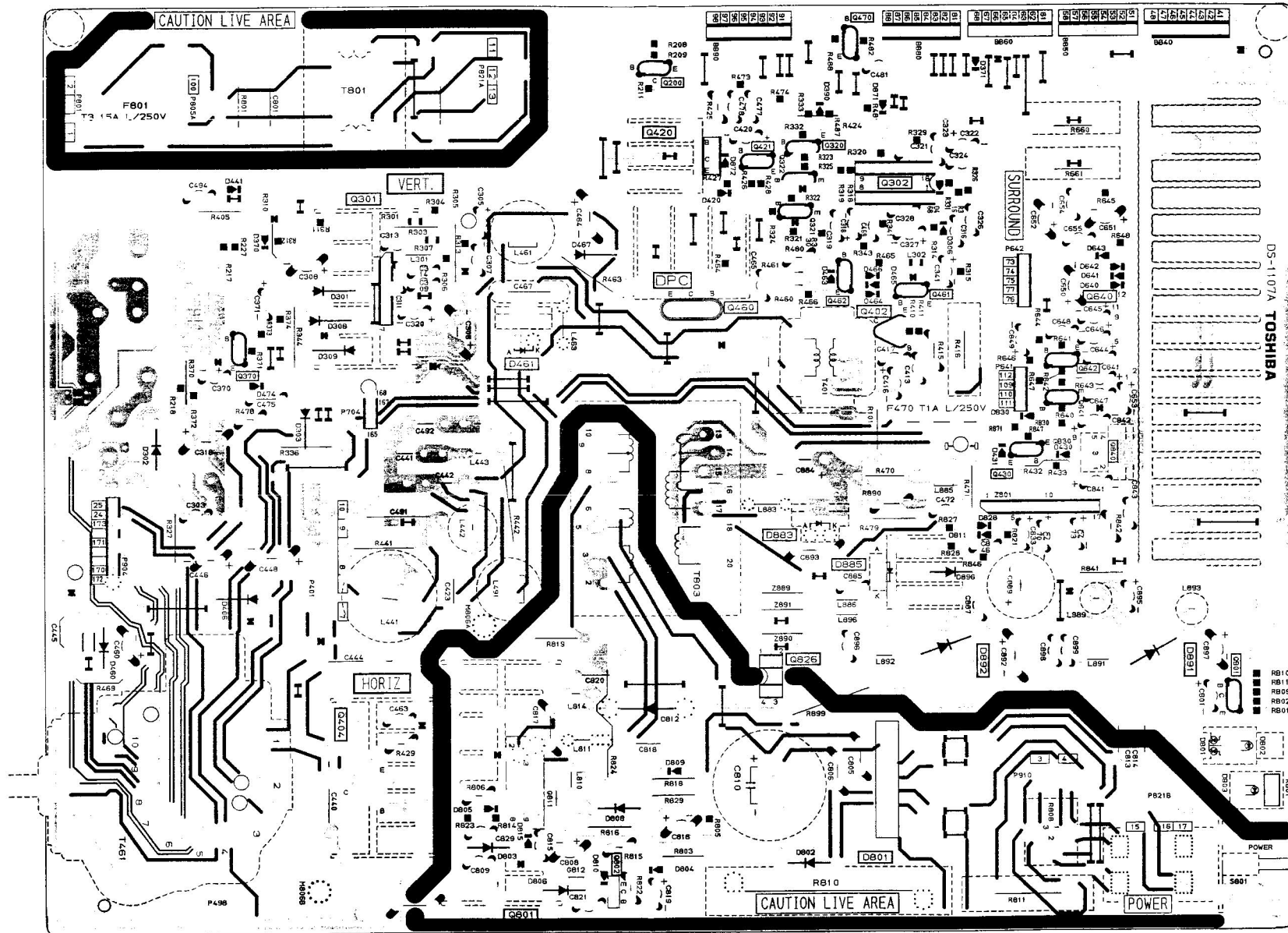
Location No.	Part No.	Description
XA01	23153325	Ceramic Resonator, 8.00M, TCR1056
XD01	23153399	Filter, TCR1066, 11.5MHz
XT01	23153012	Crystal, 27MHz
Z101	23436555	Stand Assembly
Z643	23107742	Filter, TEM1014
Z645	23107742	Filter, TEM1014
Z661	23107744	Filter, TEM1012
Z664	23107744	Filter, TEM1012
Z801	23904998	IC, HIC1016
Z889	23144451	Protector, PRF5000, 125V, 5A
Z890	23144451	Protector, PRF5000, 125V, 5A
Z891	23144451	Protector, PRF5000, 125V, 5A
Z895	23144539	Protector, PRF20005491, 125V, 2A
Z896	23144539	Protector, PRF20005491, 125V, 2A
ZD01	23303108	Filter, TLC1203T
ZD02	23303108	Filter, TLC1203T
PC BOARD ASSEMBLIES		
* U902A	23704362	Signal Board, PB5655A
* U903	23704363	Power/Def Board, PB5656X
* U904	23704364	Back/AVBoard, PB5657X
* U905	23704367	CRT Drive/DSM Board, PB5659X
* U906	23704368	Comb/1H DLBoard, PB5661A
* U907	23704369	Text/RGB Board, PB5662X
* Y991Z	23793227	P-Logic Board, PB5665
PICTURE TUBE		
△ V901	23312645	Picture Tube, A66EAK252X21
TUNER		
H001	23321196	Tuner, UF812BLX1
ACCESSORIES		
K902	23306069	Remote Hand Unit, CT-9763
Y101	23562444	Owner's Manual, English, -. 2857DB

SIGNAL BOARD PB5655A BOTTOM (FOIL) SIDE



POWER/DEF BOARD PB5656X

BOTTOM (FOIL) SIDE

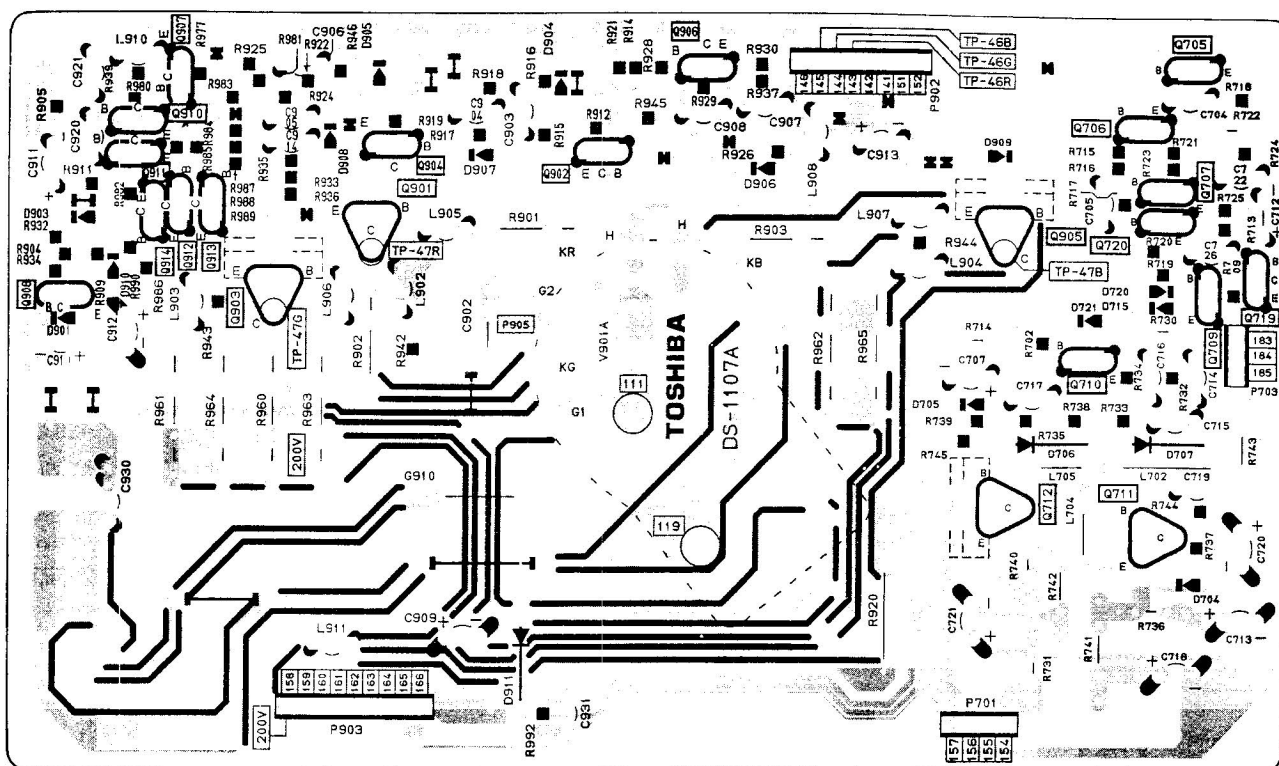


BOTTOM (FOIL) SIDE



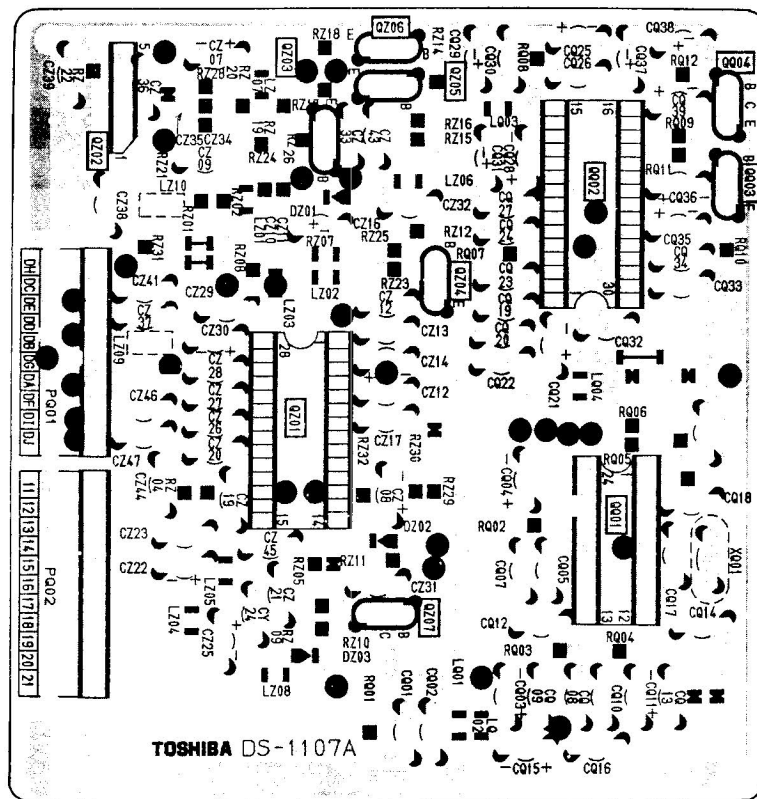
CRT. DRIVE/DSM BOARD PB5659X

BOTTOM (FOIL) SIDE

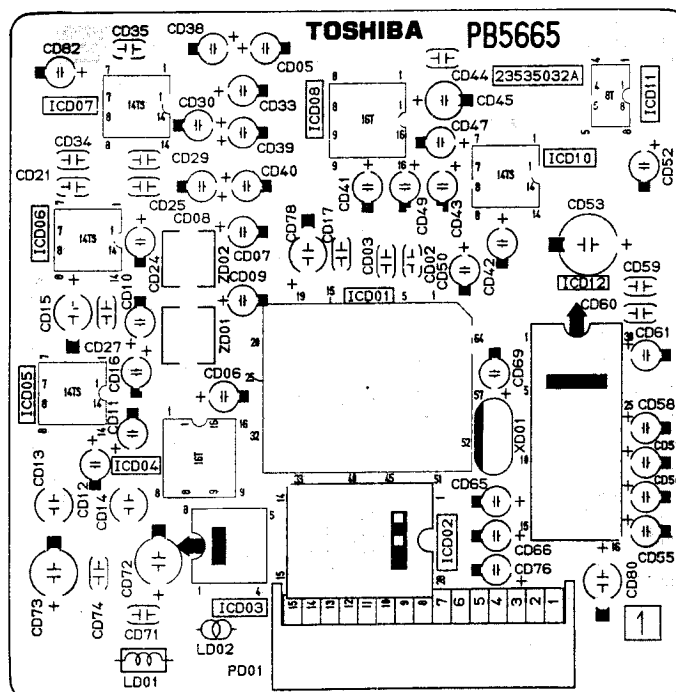


COMB/1H DL BOARD PB5661A

BOTTOM (FOIL) SIDE

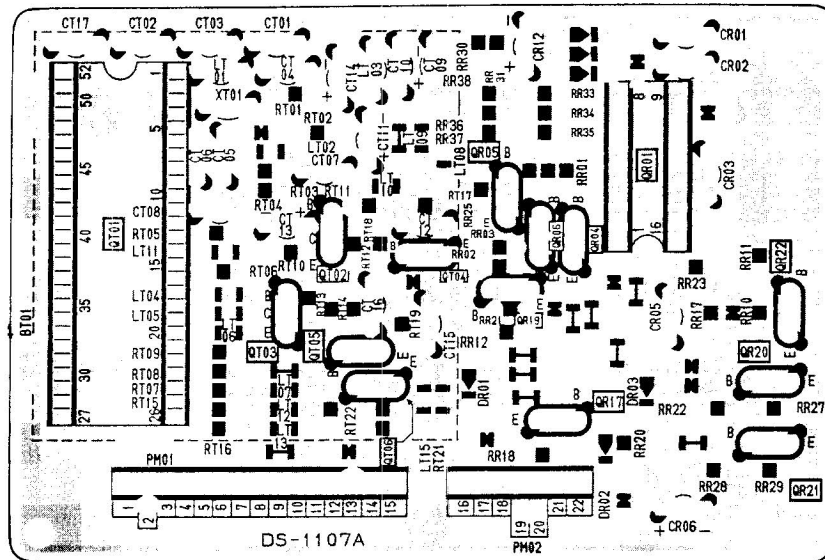


BOTTOM (FOIL) SIDE



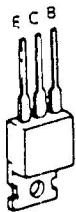
TEXT/RGB SW BOARD PB5662X

BOTTOM (FOIL) SIDE

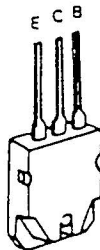


TERMINAL VIEW OF TRANSISTORS

① 2SC1569



② 2SC3927(A)



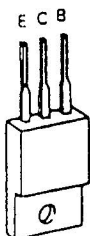
③ 2SC2580-C
2SC2655



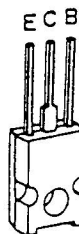
④ 2SA933S
2SA1015-Y
2SA1320-Y
2SC752GTM
2SC1685-Q
2SC1740S
2SC1815-N
2SC1959-Y
2SC2120-Y
2SC2878-A



⑤ 2SB1186A
2SC3852
2SD2253



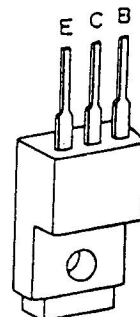
⑥ 2SC3619



⑦ RN1203
RN1204
RN1206
RN2004



⑧ 2SB1186A
2SD1763A



SPECIFICATIONS

Input Power Rating:	160 watts (Normal), 9 watts (Stand-by), AC 240 volts, 50 Hz
Mains Plug 'Fitted' Fuse:	5 ampere
Aerial Input Impedance:	75 ohm unbalanced type for UHF
Receiving Channels:	PAL I Standard: UHF channels 21 to 68
Intermediate Frequencies:	Picture I-F carrier frequency 38.9 MHz Sound I-F carrier frequency 32.9 MHz Colour sub-carrier frequency 34.47 MHz
Video Input:	PAL, PAL 60 Hz (Video disk playback) NTSC 3.58/4.43 MHz/50 Hz NTSC (VCR playback)
Picture Tube:	28 inches, A66EAK252X21, 660 mm (measured on diagonal of viewable picture area), 110° deflection
Sound Output:	10 w + 10 w (at 10% Distortion, Main) 13 w (at 10% Distortion, Woofer) 10 w (at 10% Distortion, Center) 5 w + 5 w (at 10% Distortion, Surround)
Speakers:	60 mm x 120 mm, oval, 2 pcs (Main) 100 mm, round, 1 pcs (Woofer)
Aux. Terminals:	21 pin socket (FULL), 21 pin socket (S-VIDEO/AV), MONITOR OUTPUT, STEREO HEADPHONE JACK (3.5mm)
Cabinet:	Table type
Dimensions:	Height 569 mm Width 760 mm Depth 480 mm
Mass:	35.2kg
Feature:	NICAM-I and Dolby Pro-logic surround sound

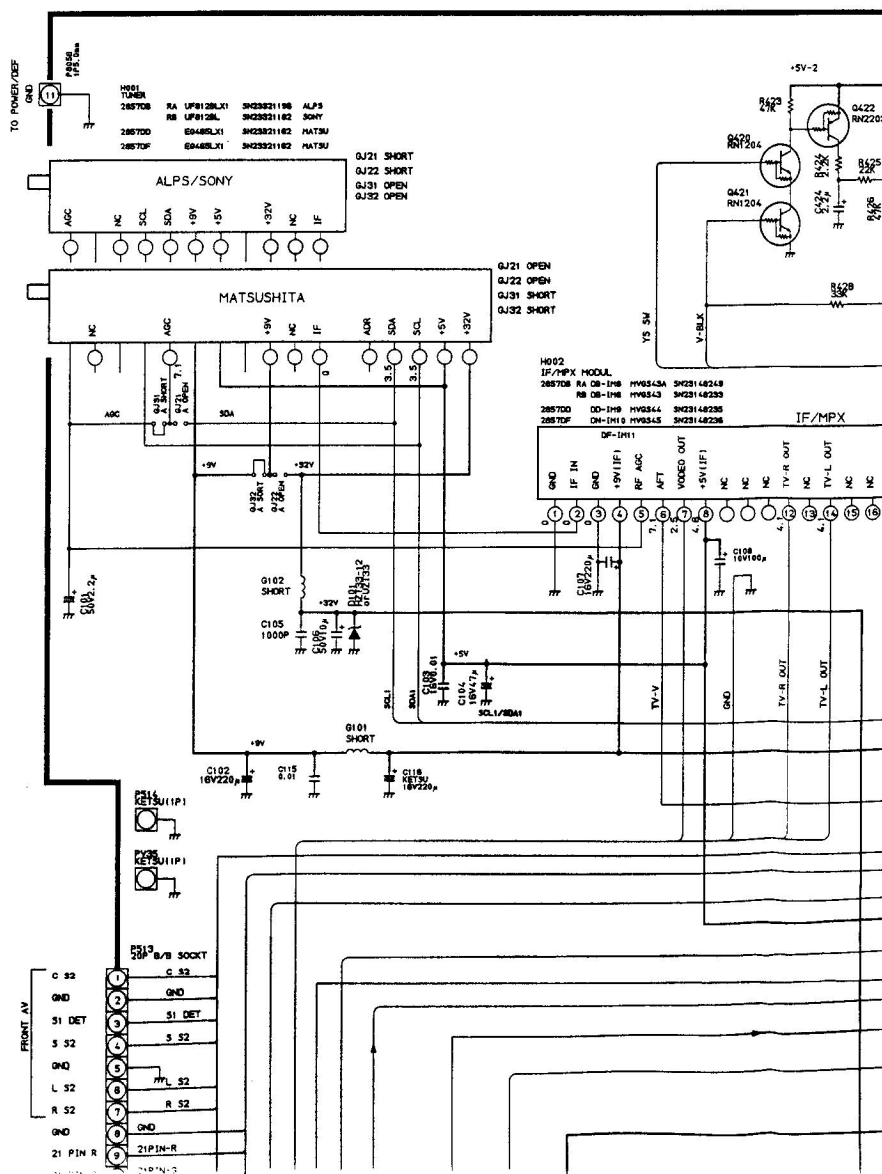
Specifications are subject to change without notice.

SCHEMATIC DIAGRAM (1/4)

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance
2. (—) or ground lead of instruments should be connected schematic on checking Non-isolated circuit surrounded to the points marked (∇) on checking isolated circuit
3. The voltage readings may vary as much as $\pm 20\%$.
4. Check that the Tuning, A.F.C., Brightness, Contrast are the best picture, making sure that the Contrast, Brightness are near to their mid-positions.
5. The waveforms were taken using a standard colour bar with a wide band oscilloscope via a low capacity probe.

U901	SIGNAL BOARD	2857DB	PB5655A
		2857DD	PB5655B
		2857DE	PB5655C

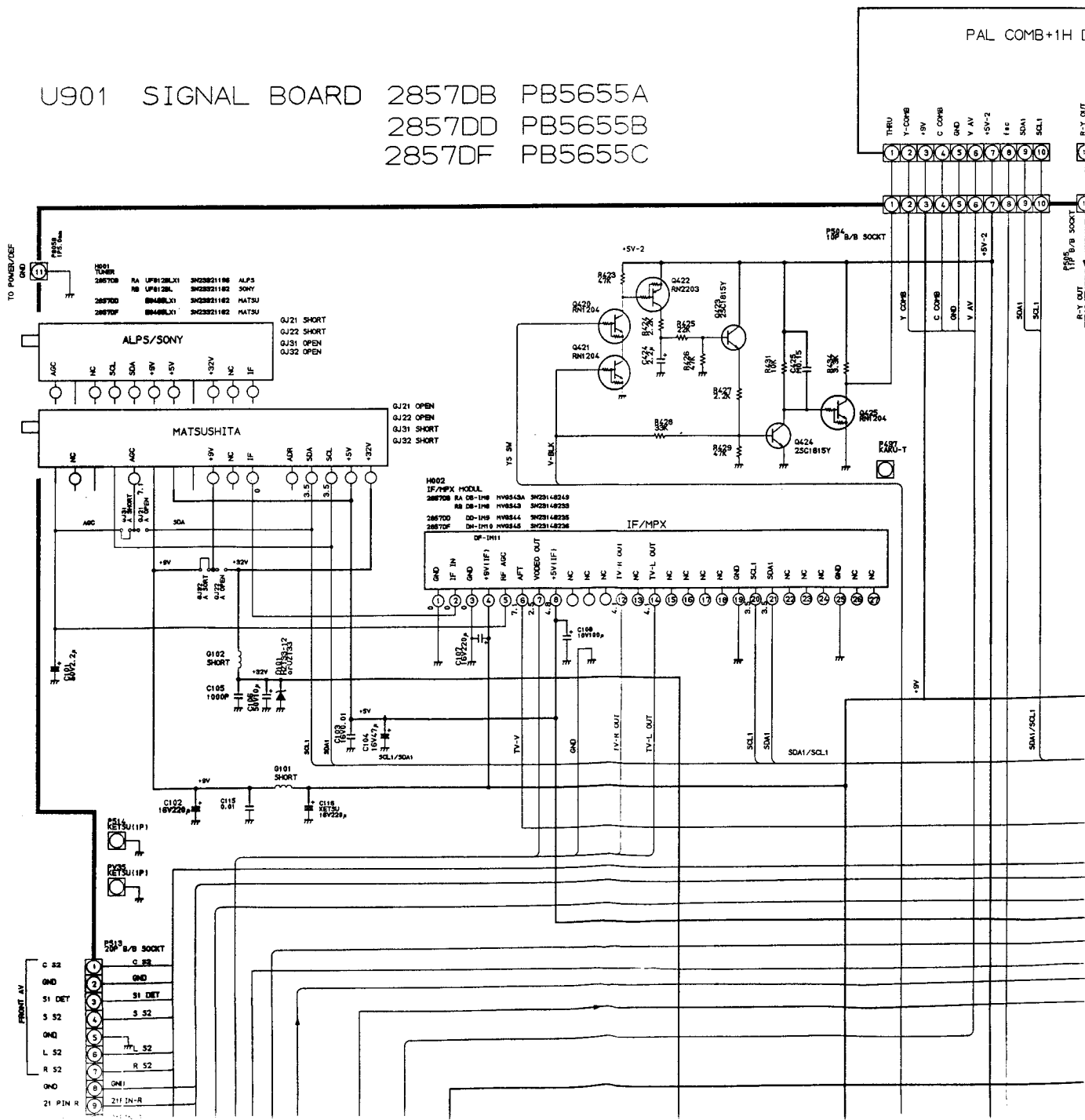


CAUTION: The international hazard symbols "△" in the schematic diagram and the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list. The mounting position of replacements is to be identical with originals. Before replacing any of these components, read carefully the **PRODUCT SAFETY NOTICE** on page 2. Do not degrade the safety of the receiver through improper servicing.

OBSERVATION OF VOLTAGES AND WAVEFORMS

1. Voltage readings were obtained using a high impedance digital voltmeter.
2. (—) or ground lead of instruments should be connected to the ground marked (⊥) in the schematic on checking Non-isolated circuit surrounded by mark but should be connected to the points marked (⊕) on checking isolated circuit.
3. The voltage readings may vary as much as $\pm 20\%$.
4. Check that the Tuning, A.F.C., Brightness, Contrast and Colour controls are adjusted for the best picture, making sure that the Contrast, Brightness and Colour controls are set near to their mid-positions.
5. The waveforms were taken using a standard colour bar signal and were observed using a wide band oscilloscope via a low capacity probe.

U901 SIGNAL BOARD 2857DB PB5655A
2857DD PB5655B
2857DF PB5655C



"Δ" in the schematic diagram and the parts list designate components important for safety and should be replaced only with types identical in the parts list. The mounting position of replacements is to be the same as the original components. For more information on the safety of these components, read carefully the PRODUCT SAFETY section of the receiver through improper servicing.

TESTING AND WAVEFORMS

Using a high impedance digital voltmeter. The test points should be connected to the ground marked (⊥) in the test circuit surrounded by mark but should be connected to the test circuit checking isolated circuit.

Accuracy is as much as $\pm 20\%$.

Brightness, Contrast and Colour controls are adjusted for the test signal that the Contrast, Brightness and Colour controls are set.

A standard colour bar signal and were observed using a digital oscilloscope and a capacity probe.

NOTES:

1. This circuit diagram is subject to change without notice.

EXPRESSION

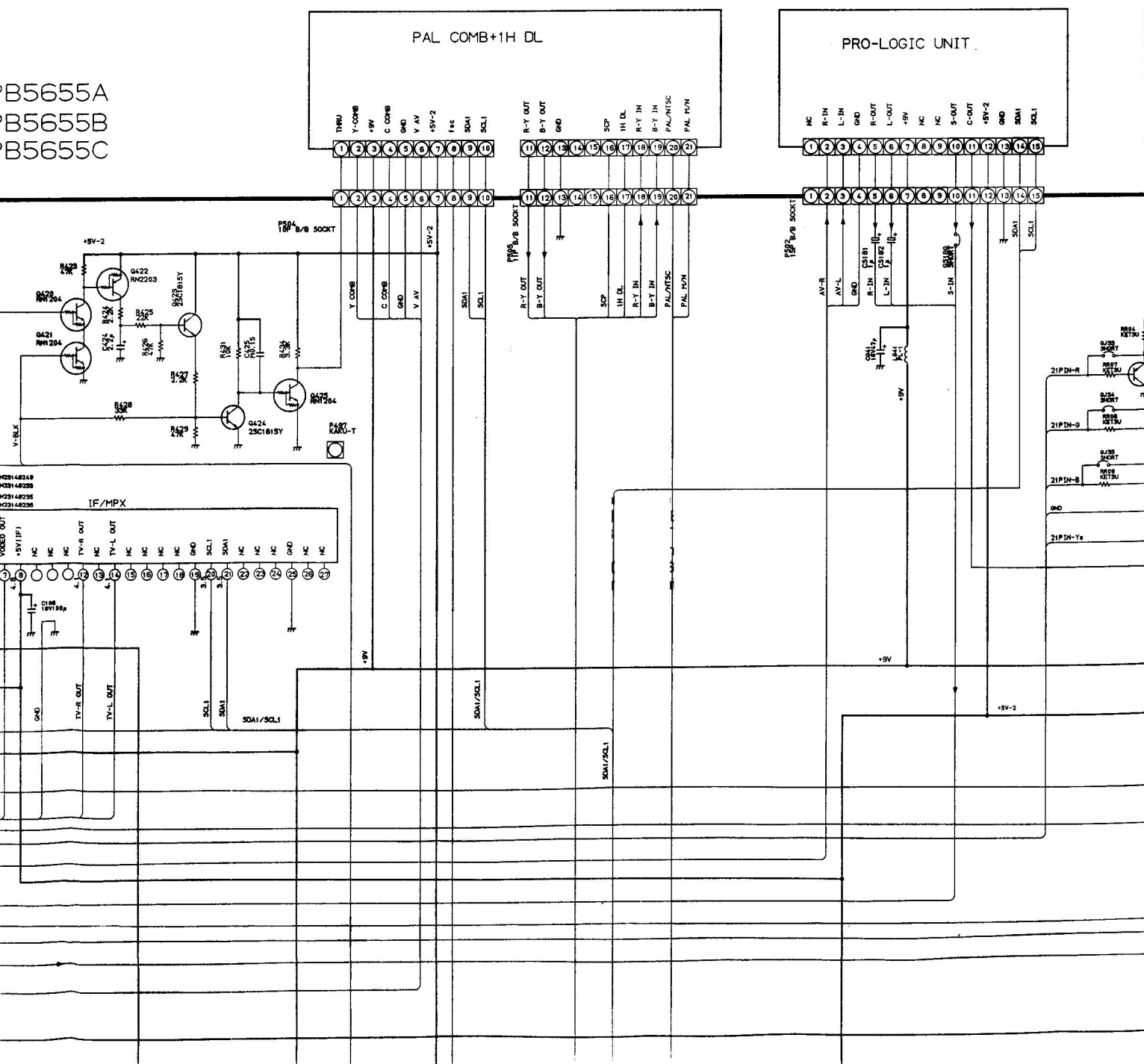
VALUE OF RESISTOR, CAPACITOR and INDUCTOR

1. Resistance is shown in ohm, k=1,000, M=1,000,000.
2. Unless otherwise noted in schematic, all capacitor values less than 1 are expressed in μF and the values more than 1 in pF.
3. Unless otherwise noted in schematic, all inductor values more than 1 are expressed in μH , and the values less than 1 in H.

GROUNDING SYMBOL

1. ⊥: Non isolated ground, $\overline{\text{---}}$: Isolated ground.

B5655A
B5655B
B5655C



am is subject to change without notice.

CAPACITOR and INDUCTOR

n ohm, k=1,000, M=1,000,000.

ted in schematic, all capacitor values less than 1 are expressed in
ore than 1 in pF.

ted in schematic, all inductor values more than 1 are expressed in
ss than 1 in H.

nd,  : Isolated ground.

RESISTORS

Prefixed to values:

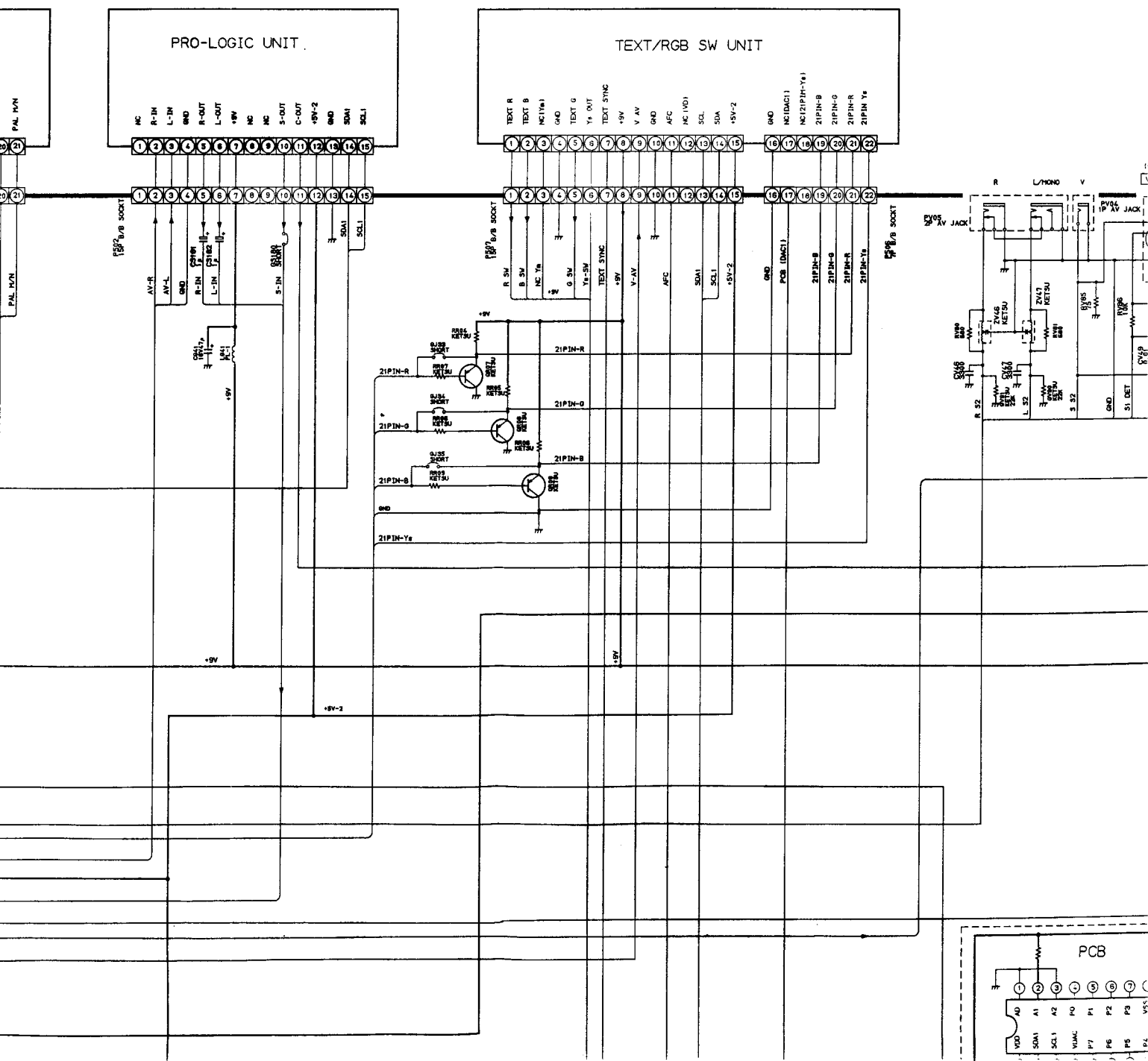
TYPE	MARK
Carbon Comp.	S
Oxide Metal Film	R
Ins. Carbon Film	P
Wire Wound	W
Cement covered W.W.	NO MARK
Fusible Res.	FR

Suffixes to values:

TOLERANCE
$\pm 1\%$
$\pm 2\%$

Suffixes to VR values:

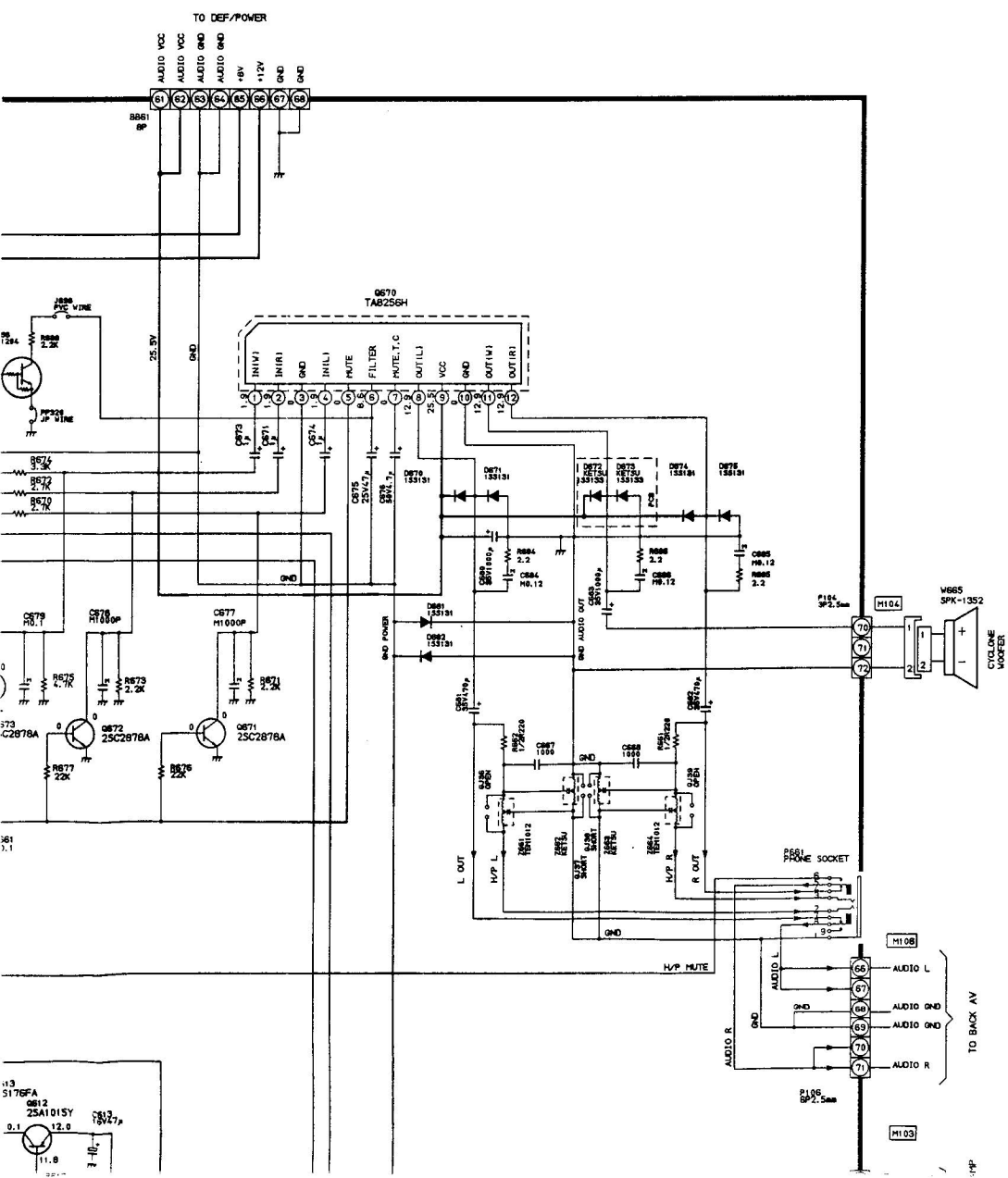
LAW
Linear
'C' Curve Characteristic

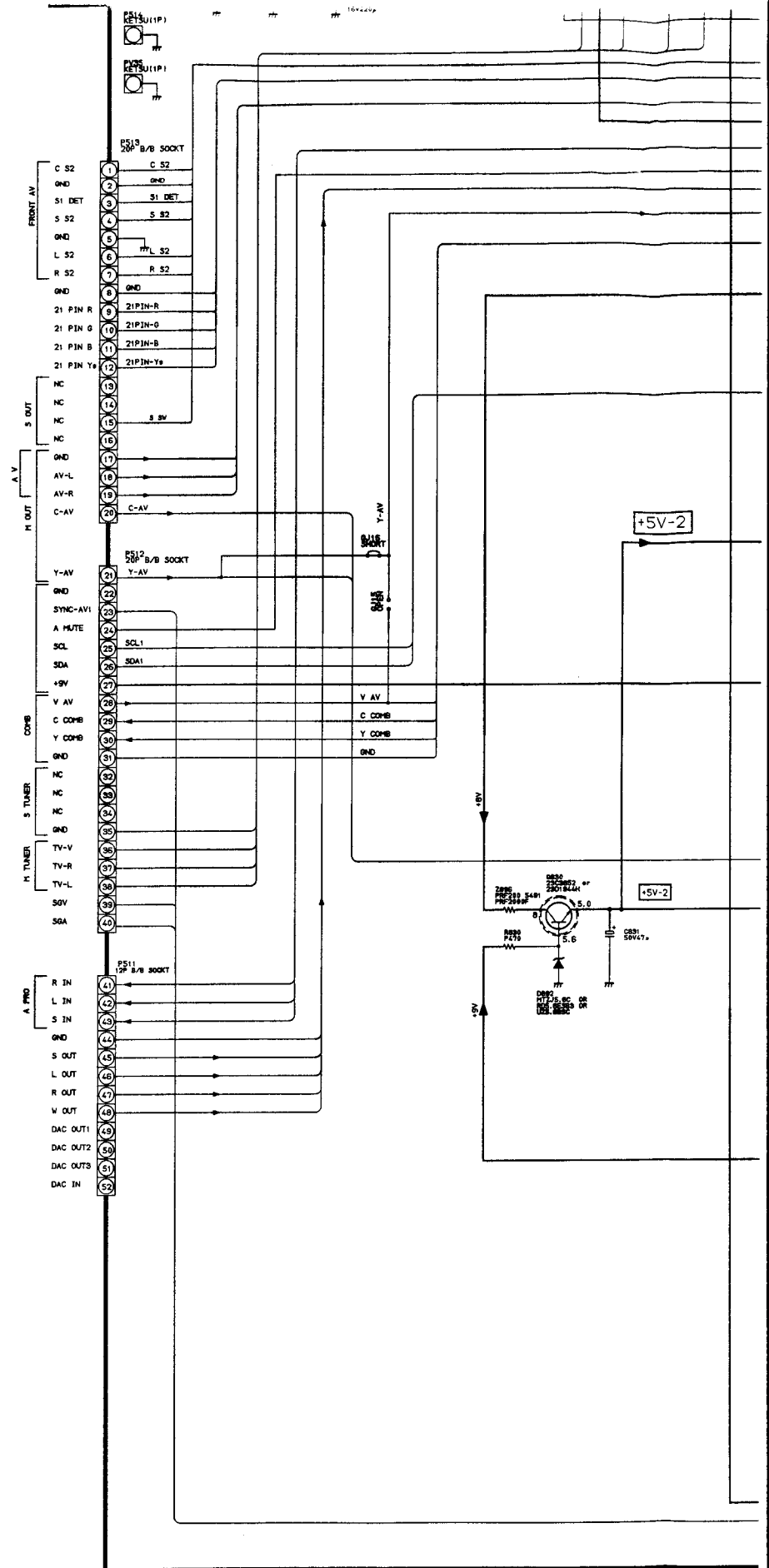


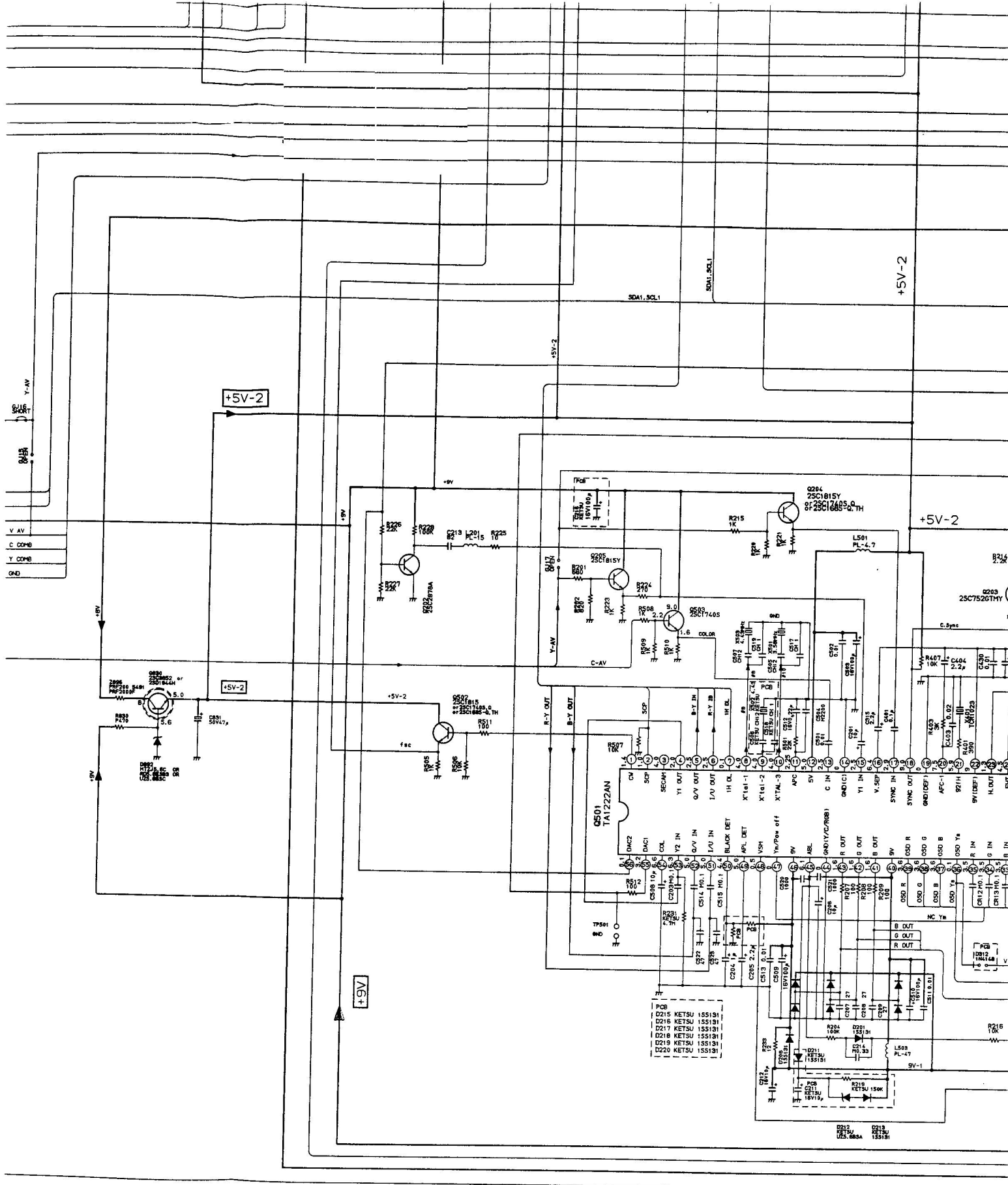
Rating Markings:

Type	Mark
Ceramic Disc 50V Only	
Electrolytic	
Electrolytic Non-Polar	
Variable Capacitor	
Other	

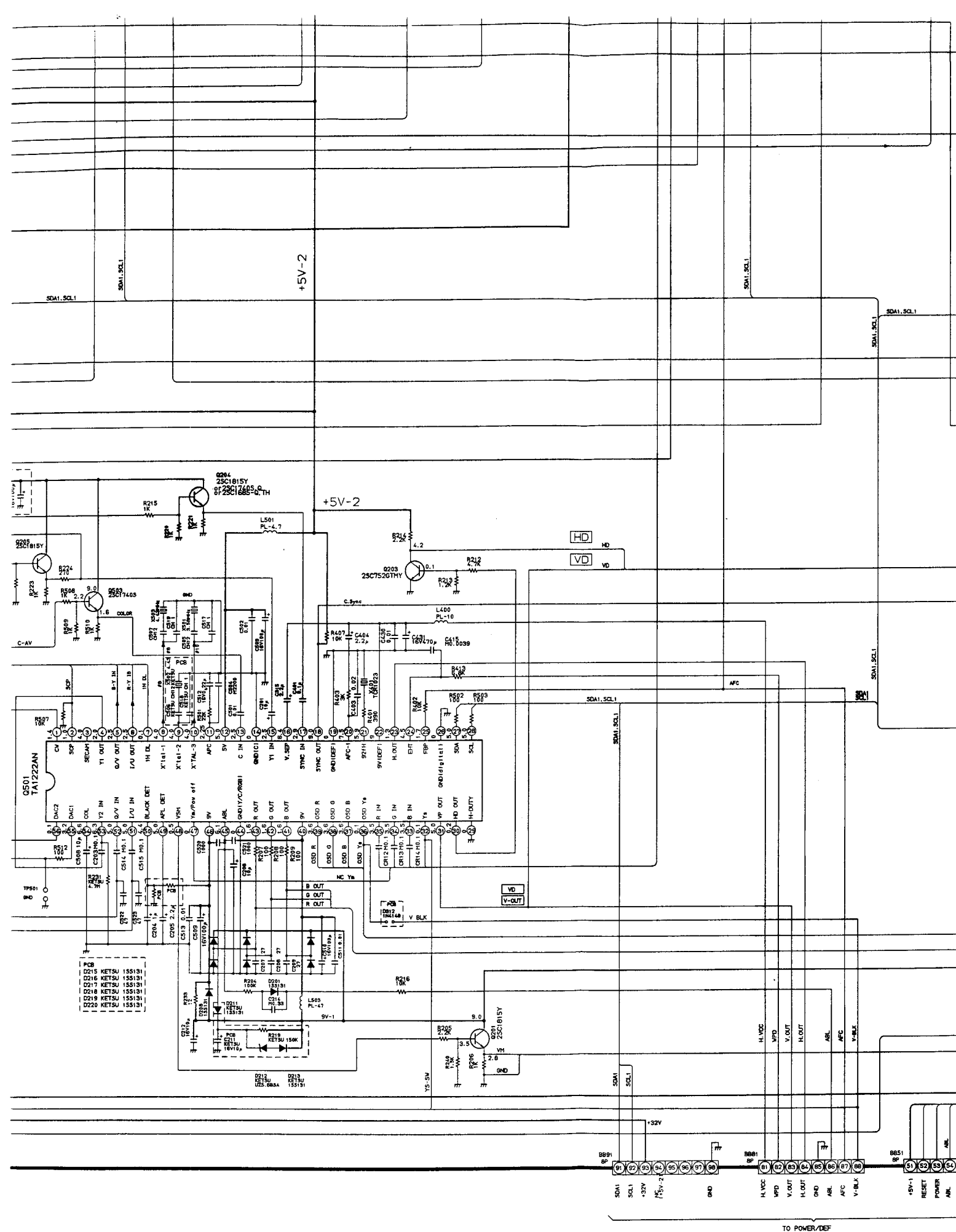
MARK	WATTAGE	MARK
	3W	
	5W	
	10W	
	15W	
	20W	
	25W	

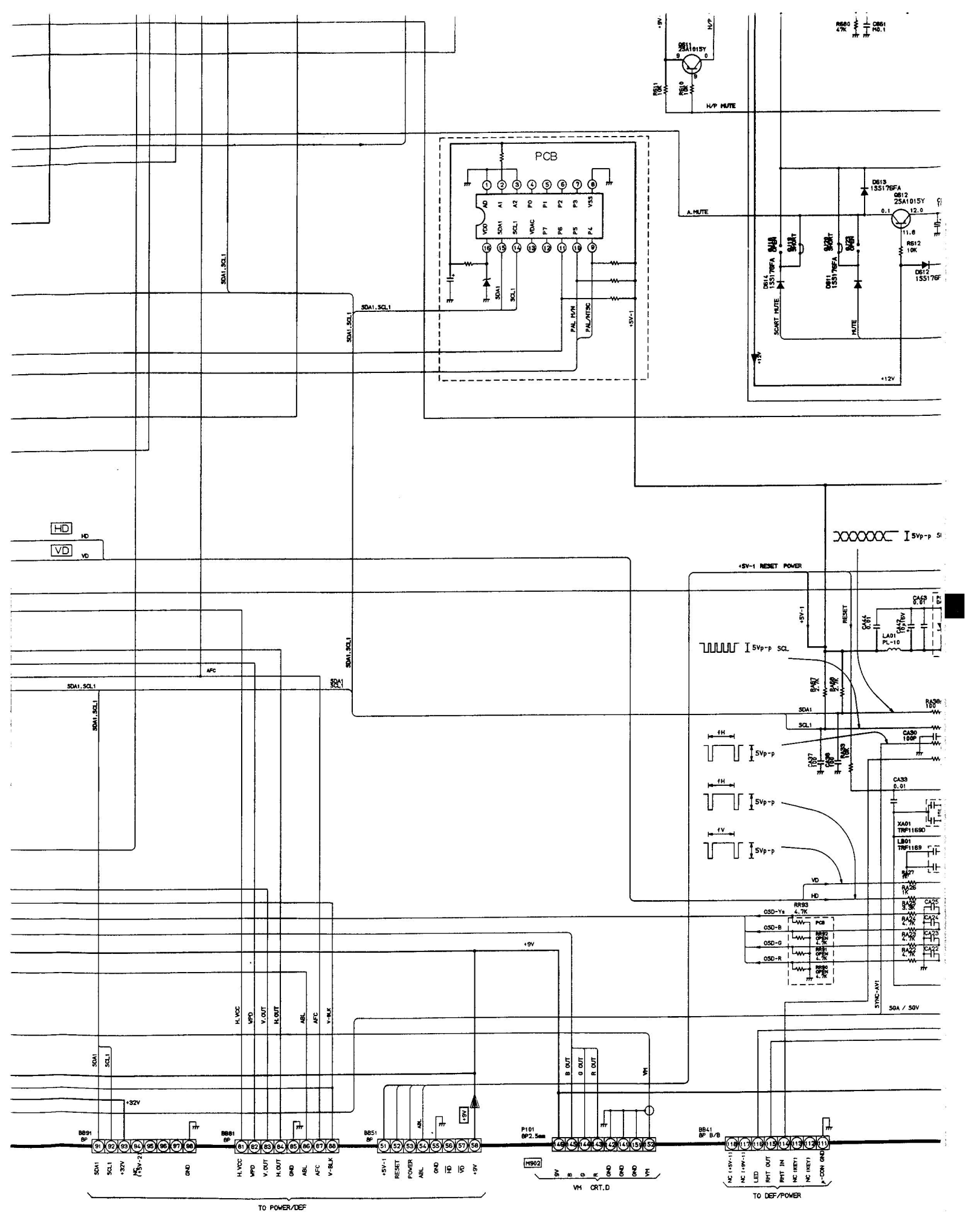


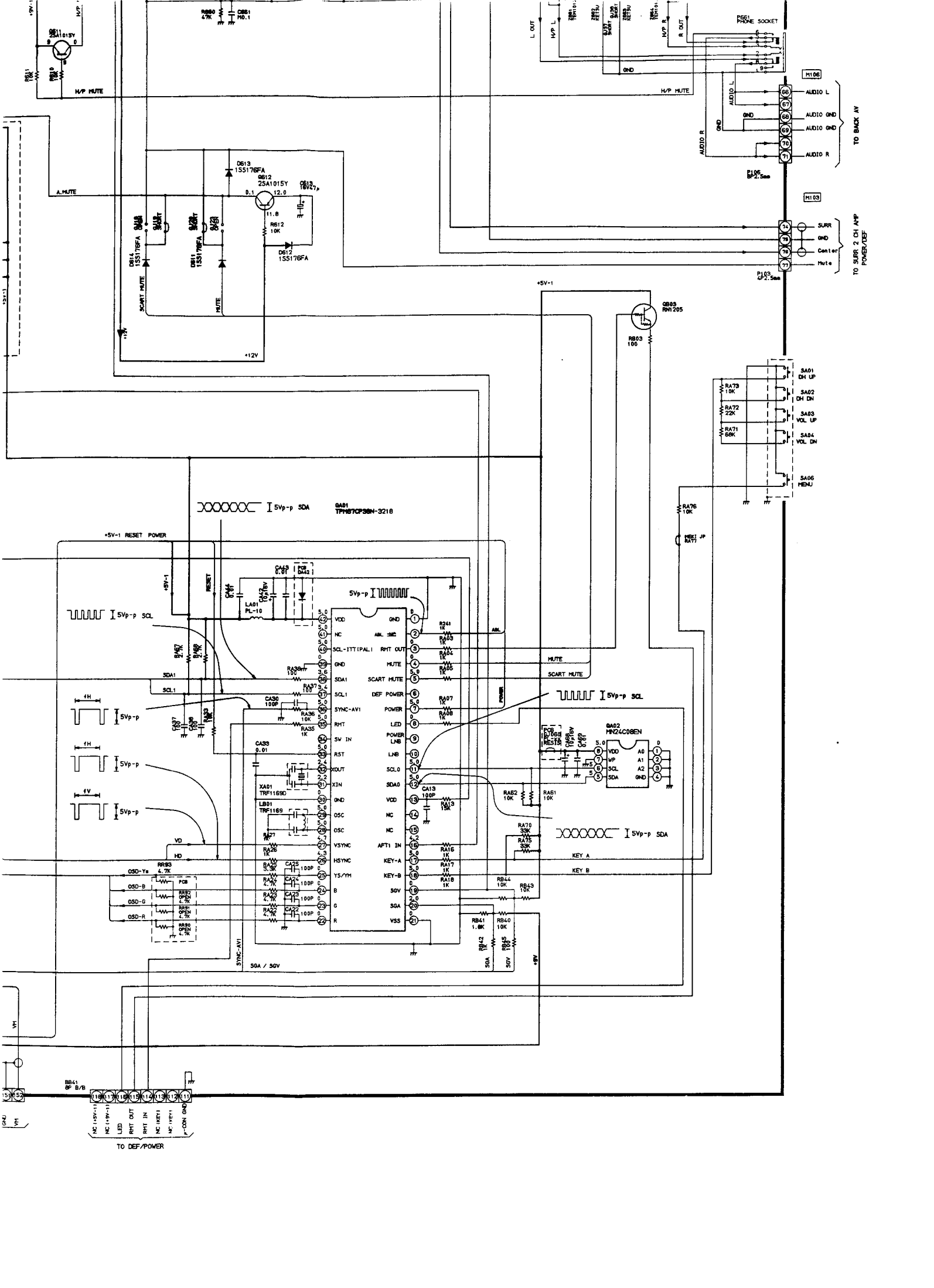




- D215 KETSU 155131
- D216 KETSU 155131
- D217 KETSU 155131
- D218 KETSU 155131
- D219 KETSU 155131
- D220 KETSU 155131



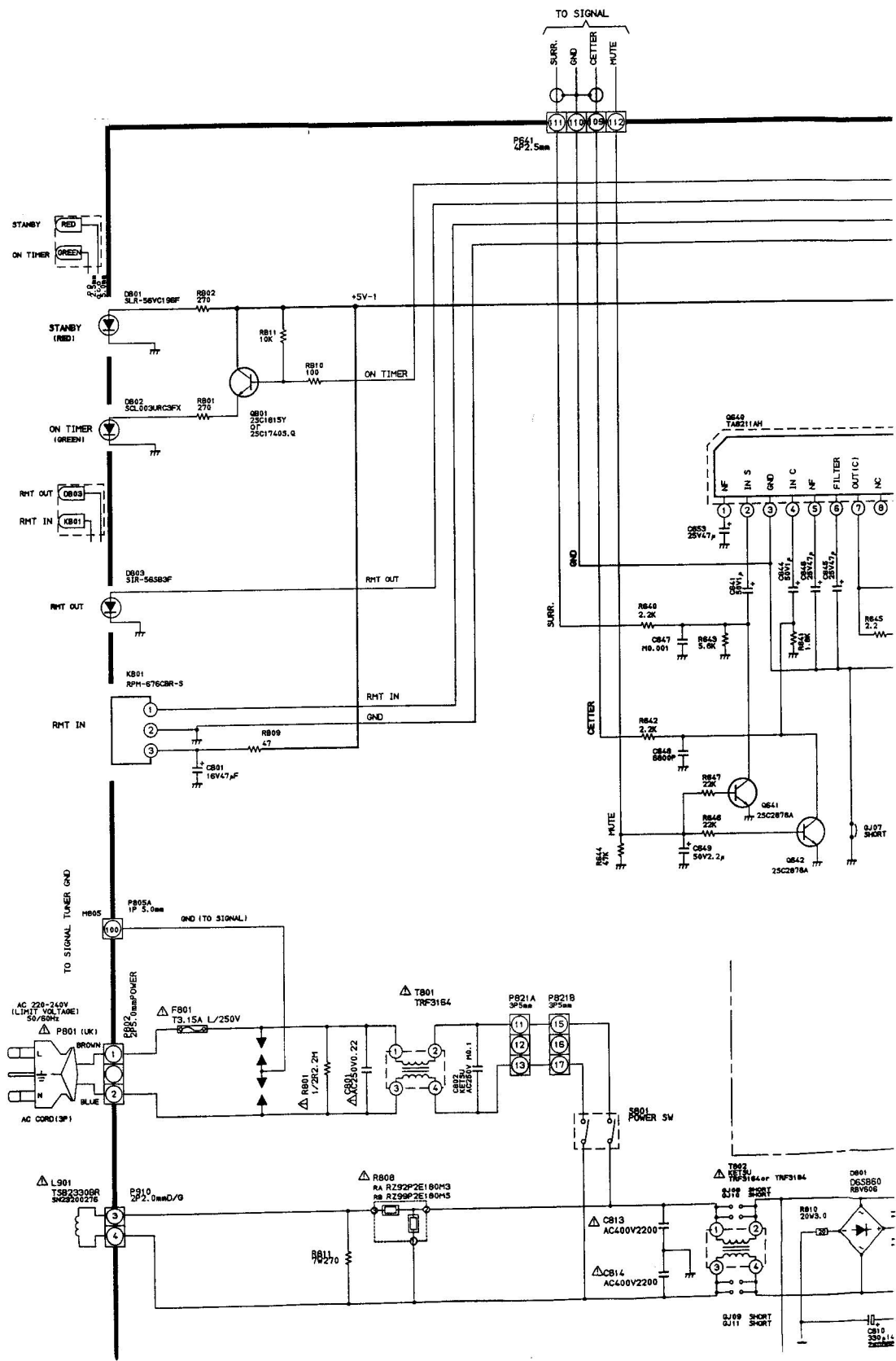




2857DB

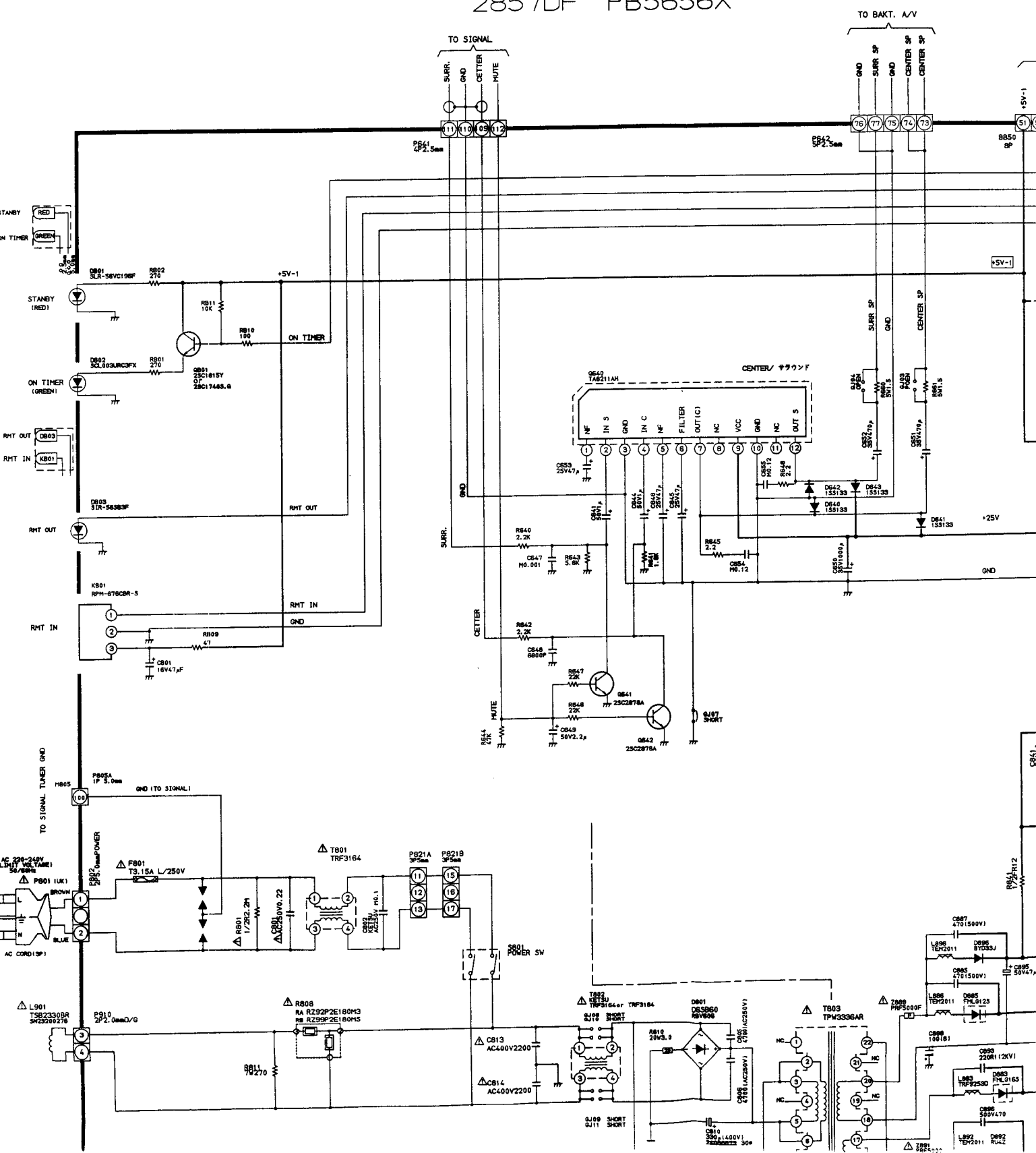
SCHEMATIC DIAGRAM (2/4)

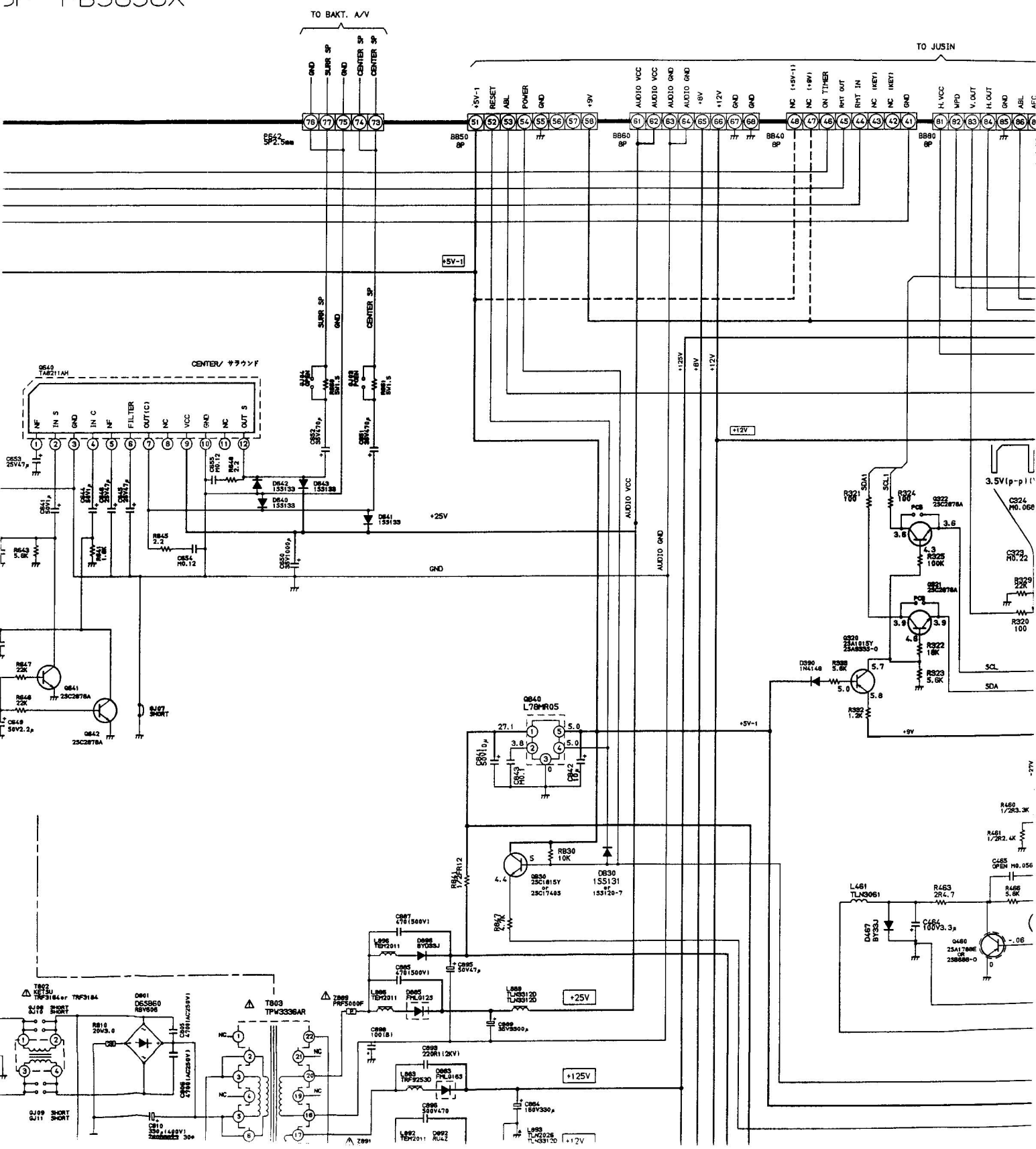
U903 POWER/DEF BOARD 2857DB PB5656X
 2857DD PB5656X
 2857DF PB5656X

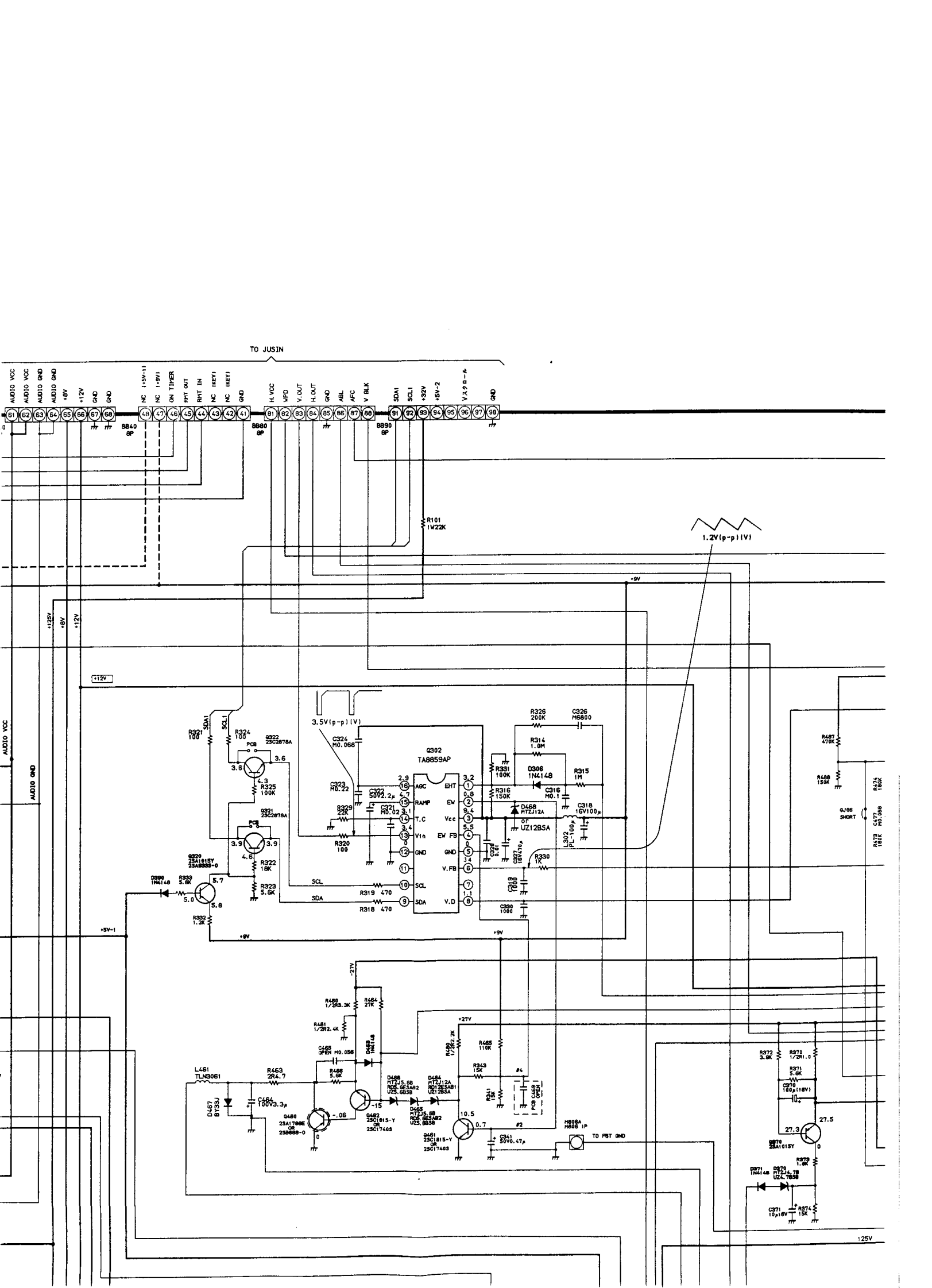


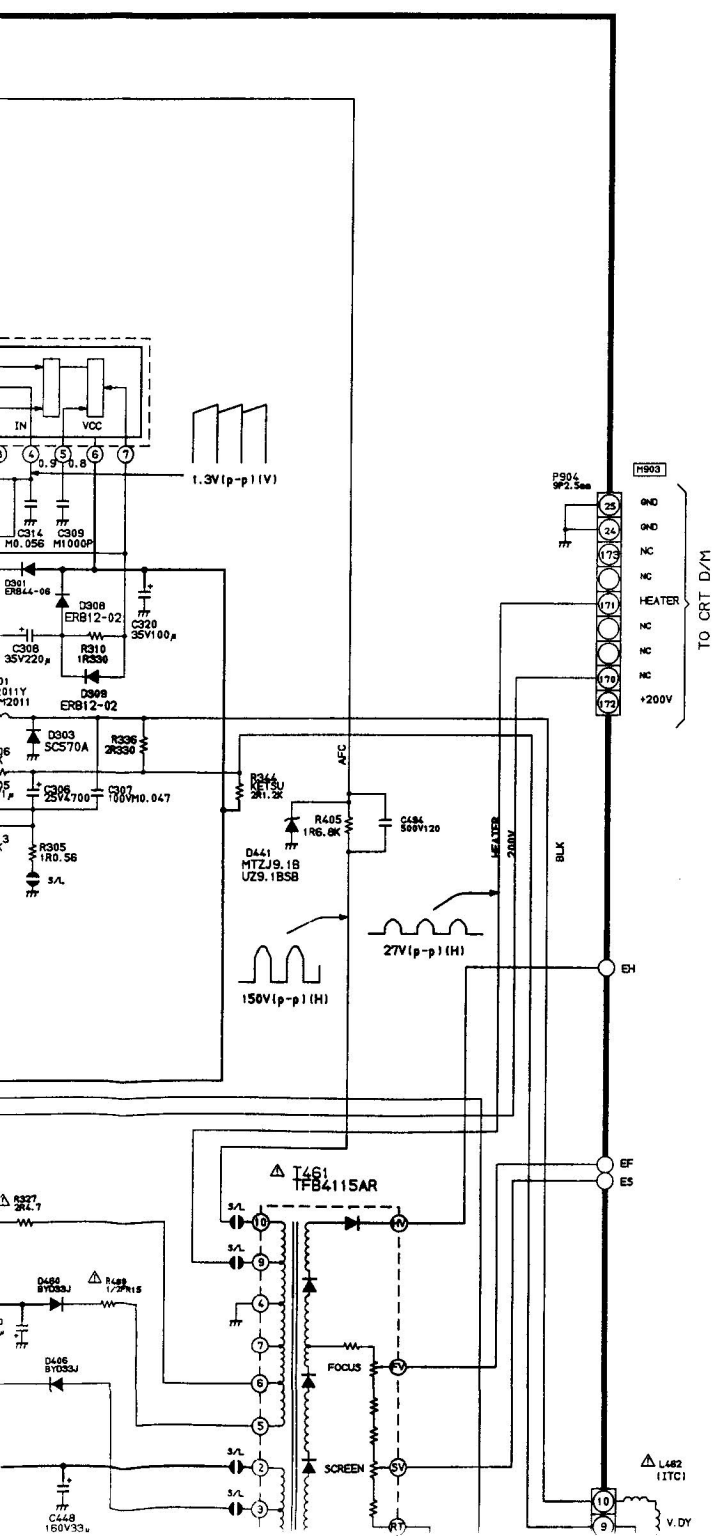
SCHEMATIC DIAGRAM (2/4)

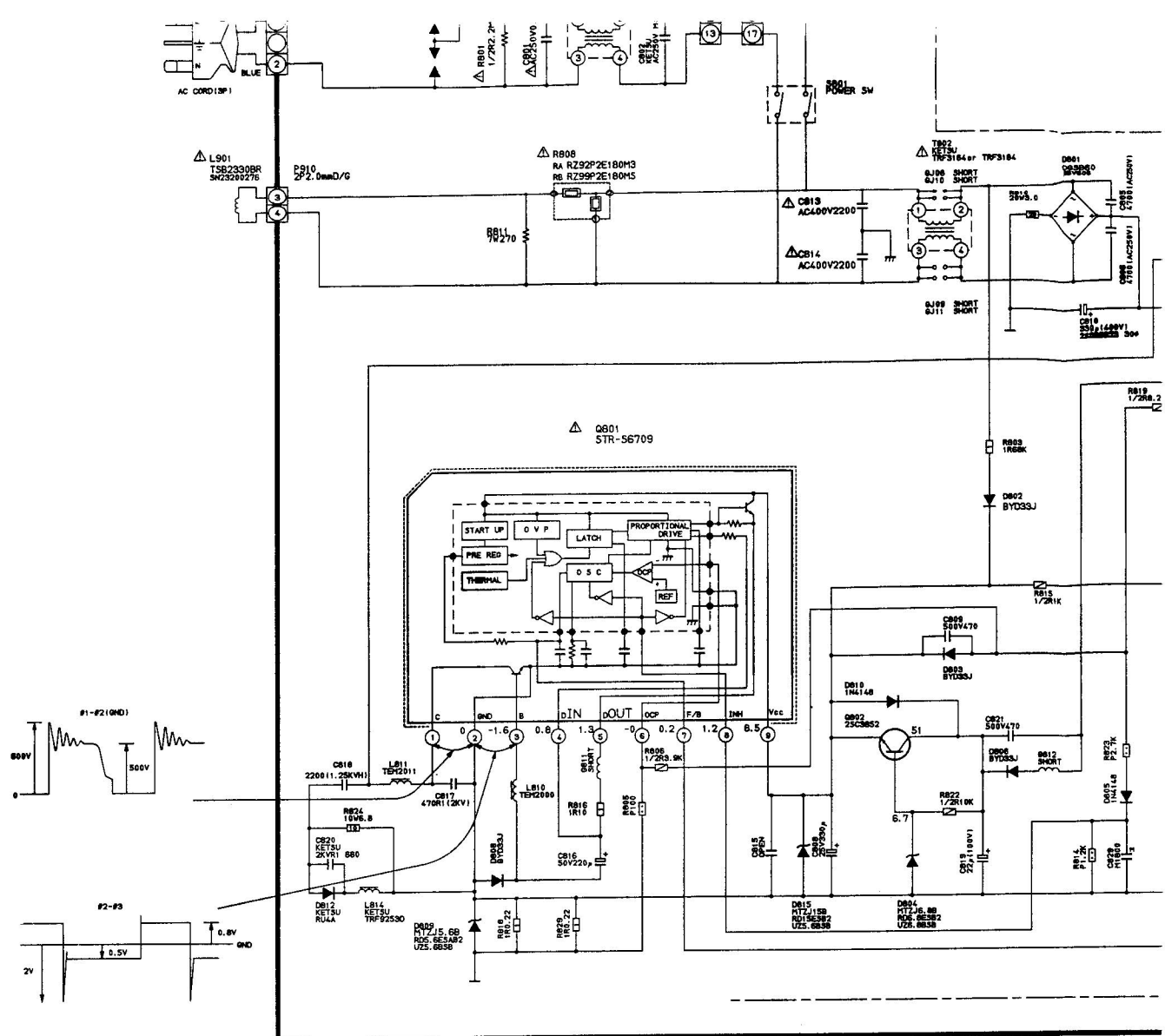
U903	POWER/DEF BOARD	2857DB	PB5656X
		2857DD	PB5656X
		2857DF	PB5656X

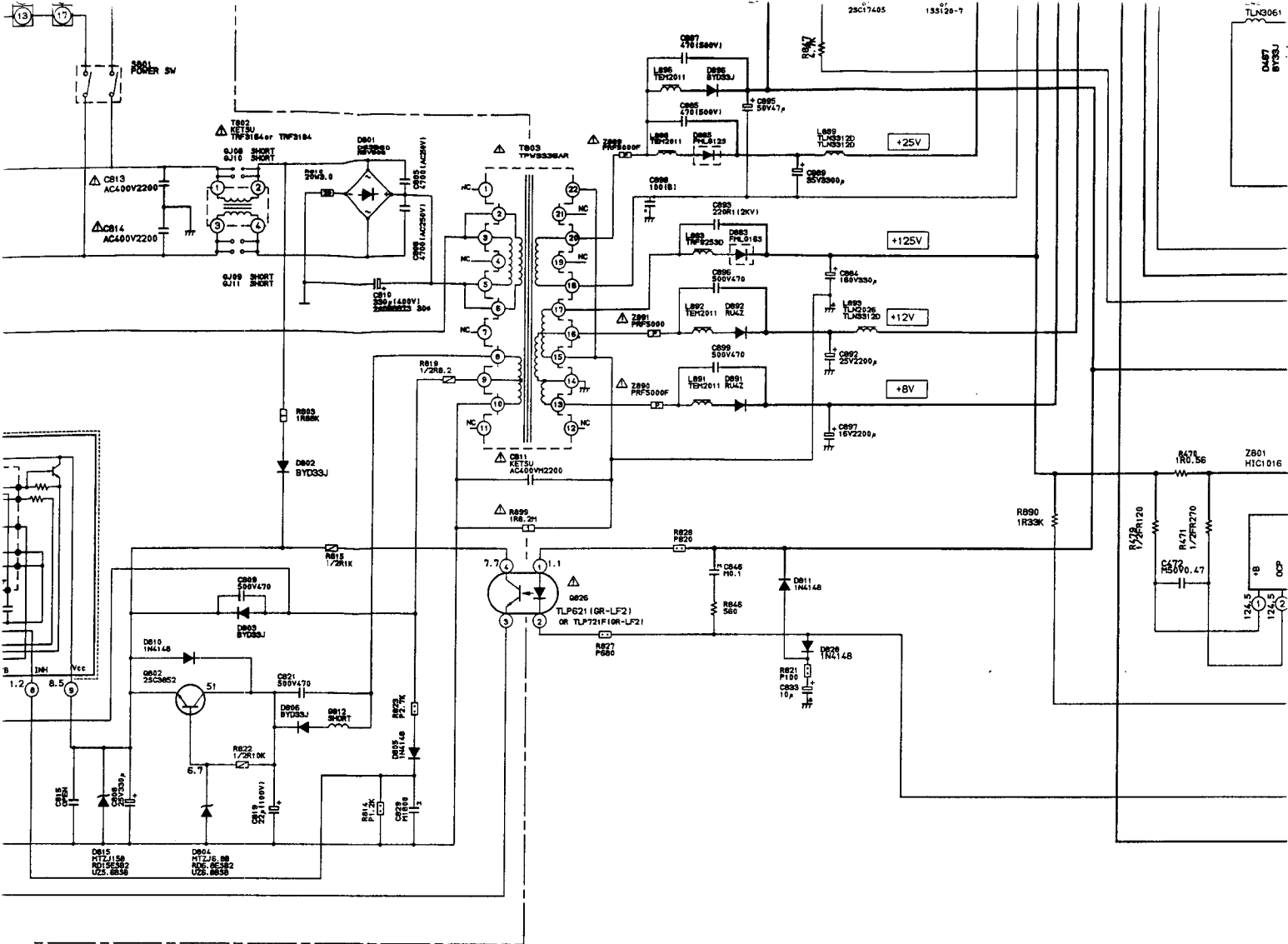


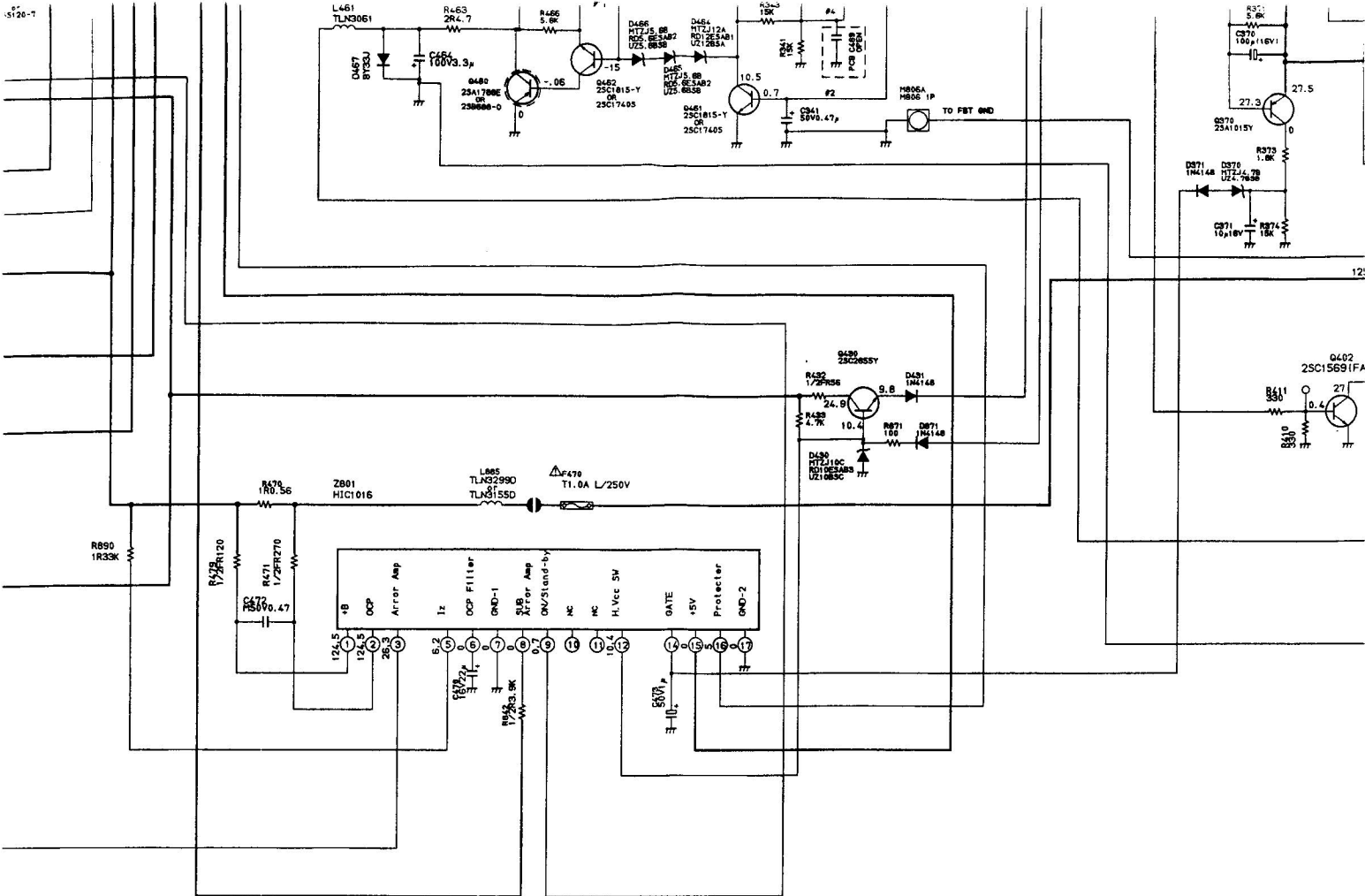


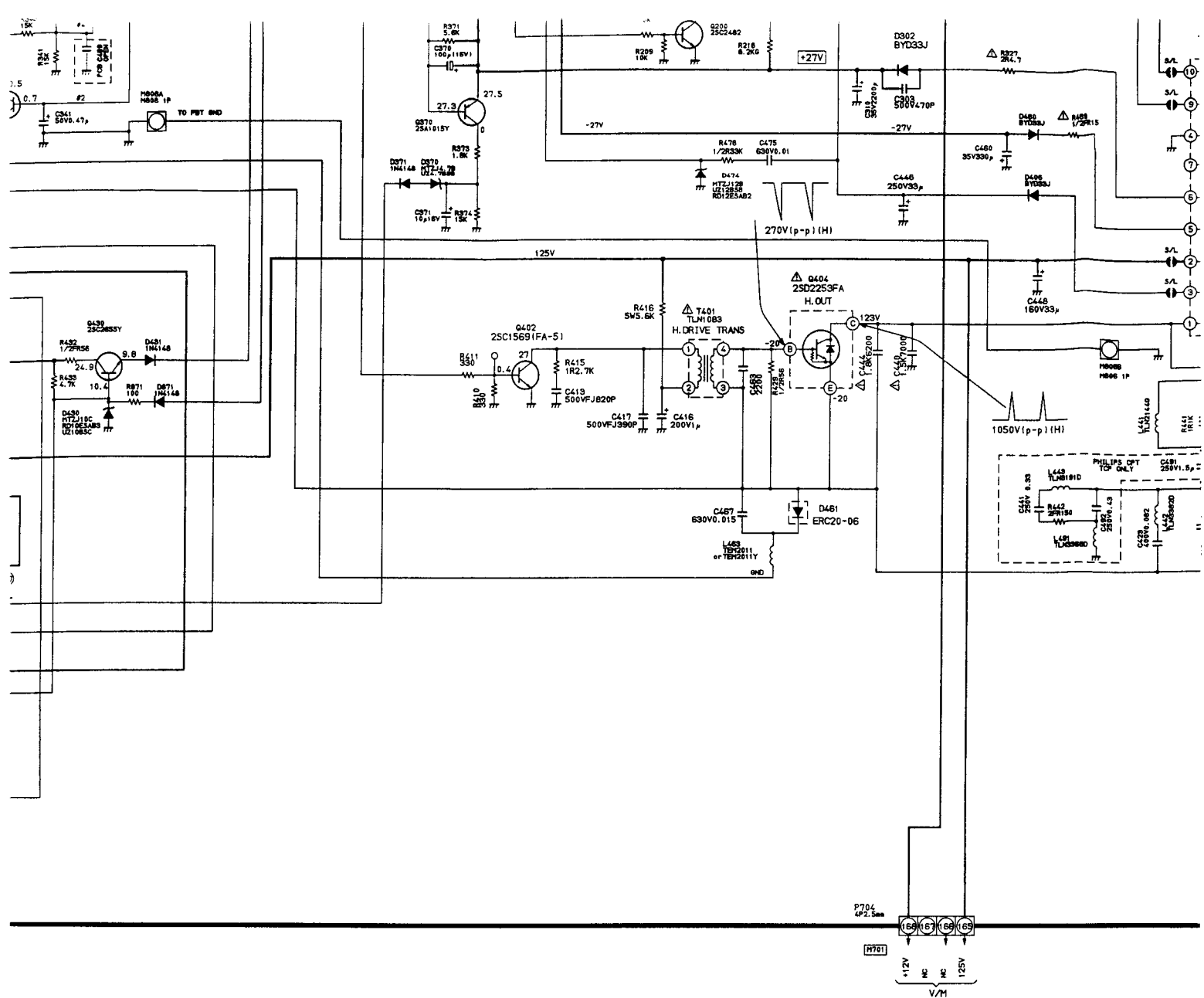


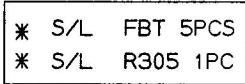








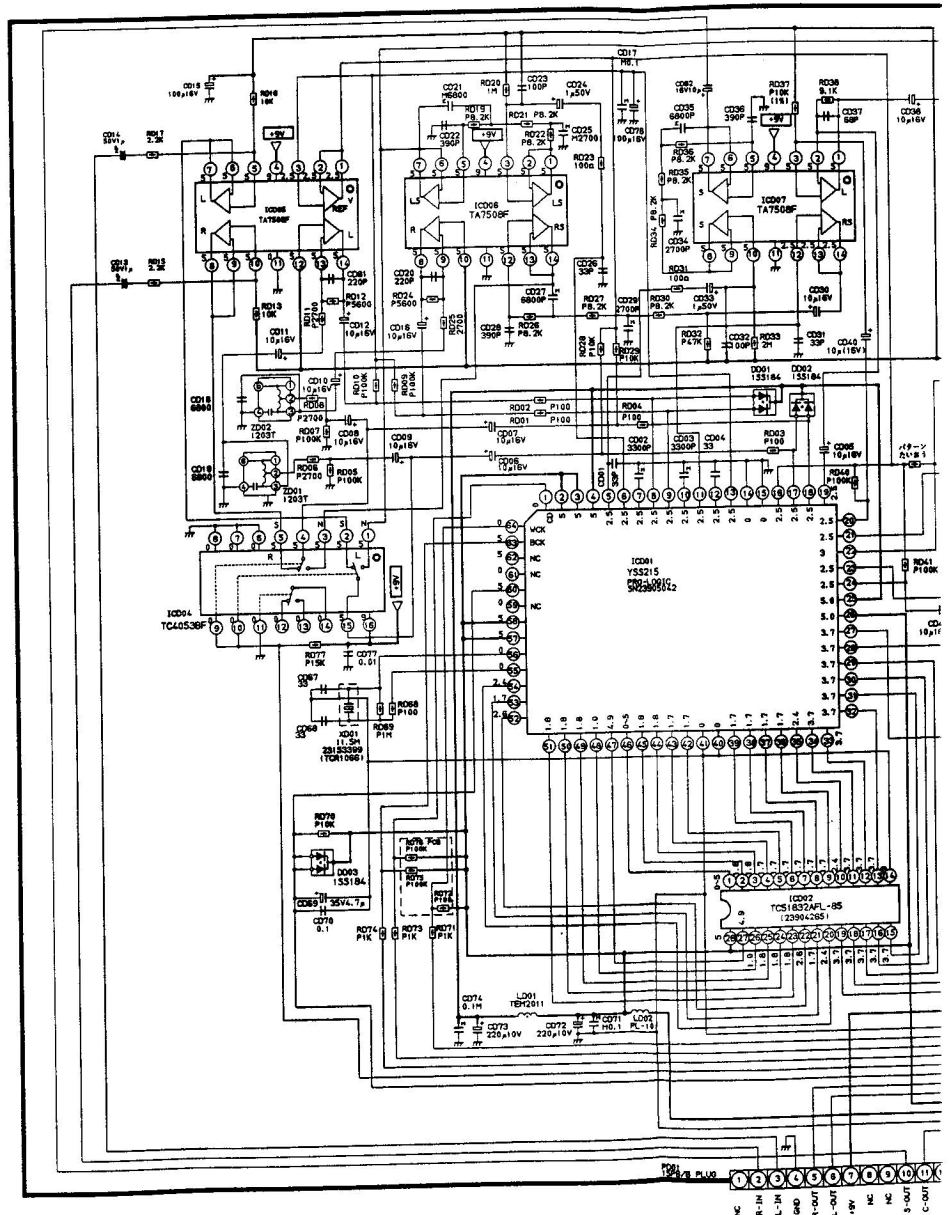




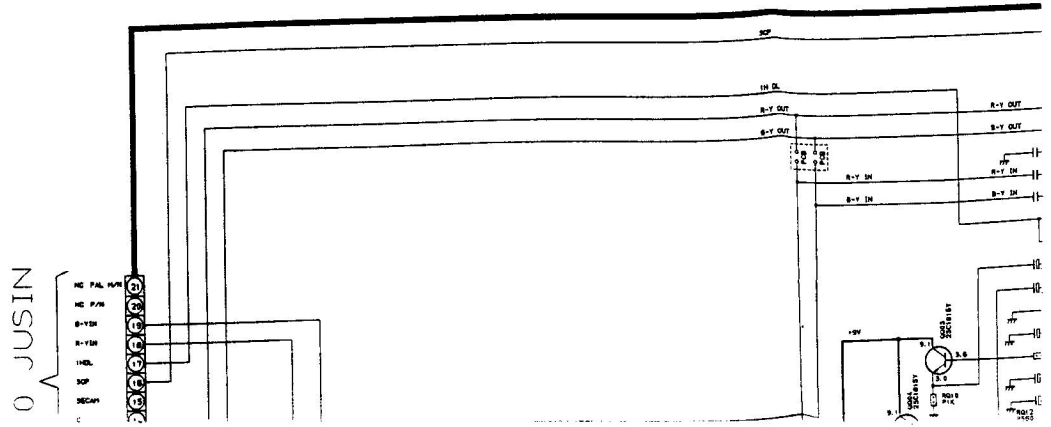
2857DB

SCHEMATIC DIAGRAM (3/4)

U908 PRO-LOGIC BOARD 2857DB PB5665
 2857DD PB5665
 2857DF PB5665

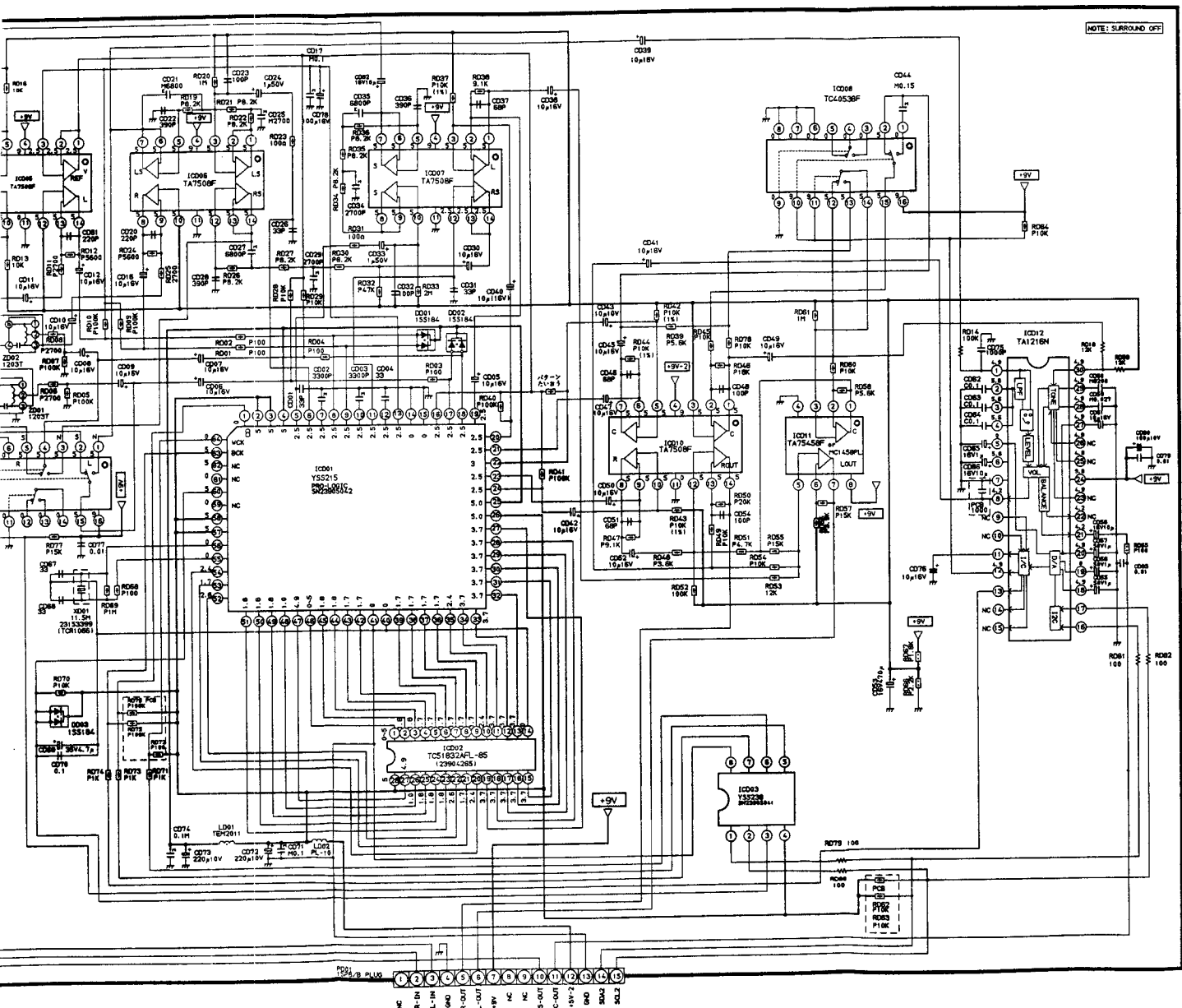


U906 COMB/1H DL BOARD 2857DB PB5661A

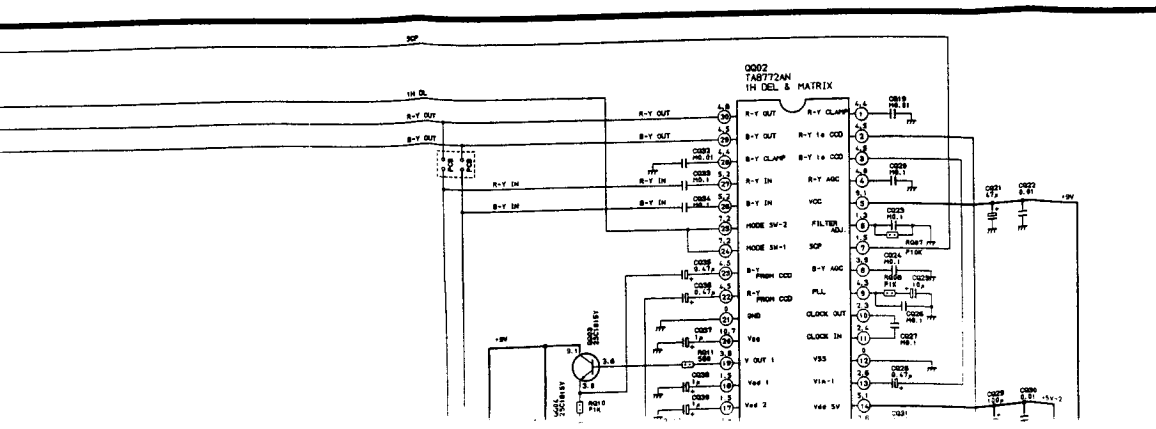


SCHEMATIC DIAGRAM (3/4)

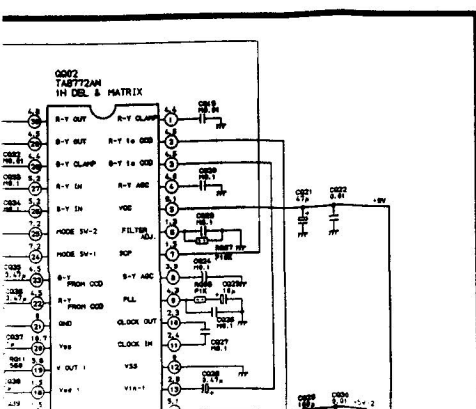
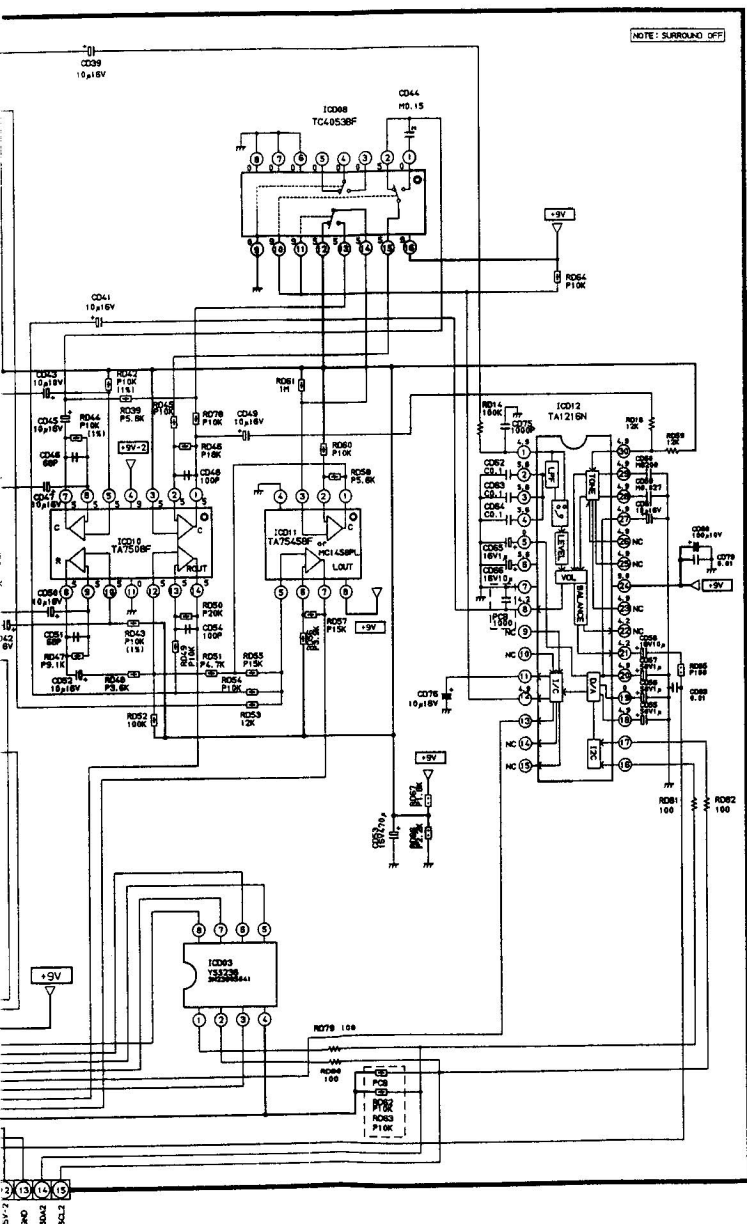
LOGIC BOARD 2857DB PB5665
2857DD PB5665
2857DF PB5665



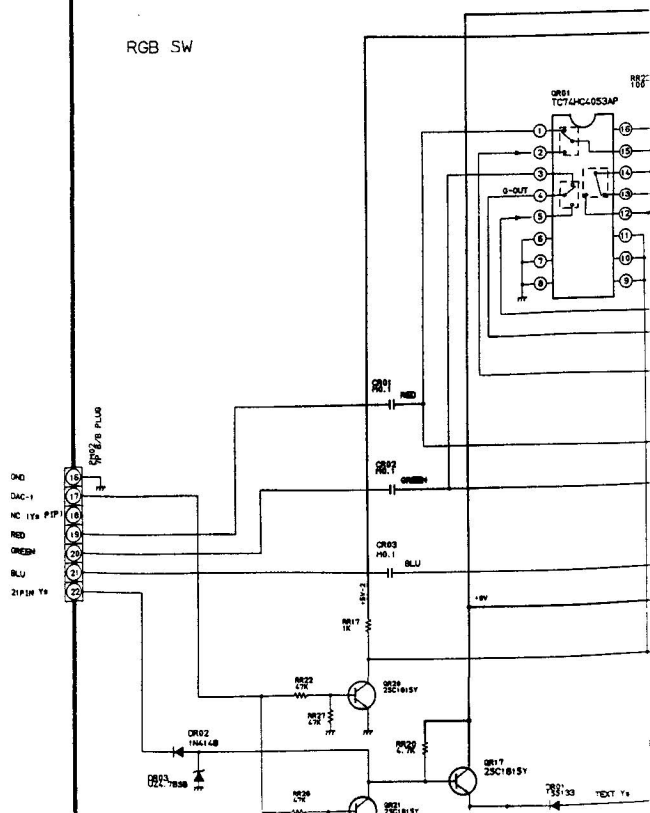
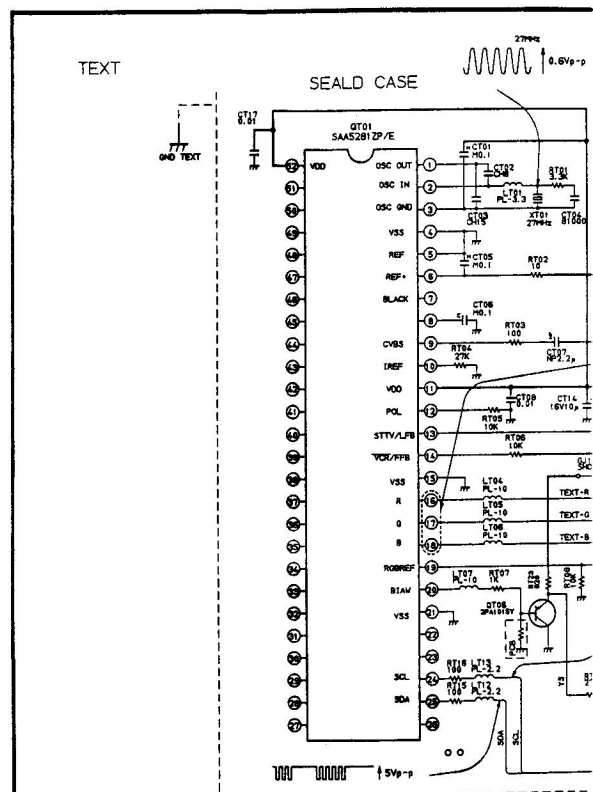
DL BOARD 2857DB PB5661A

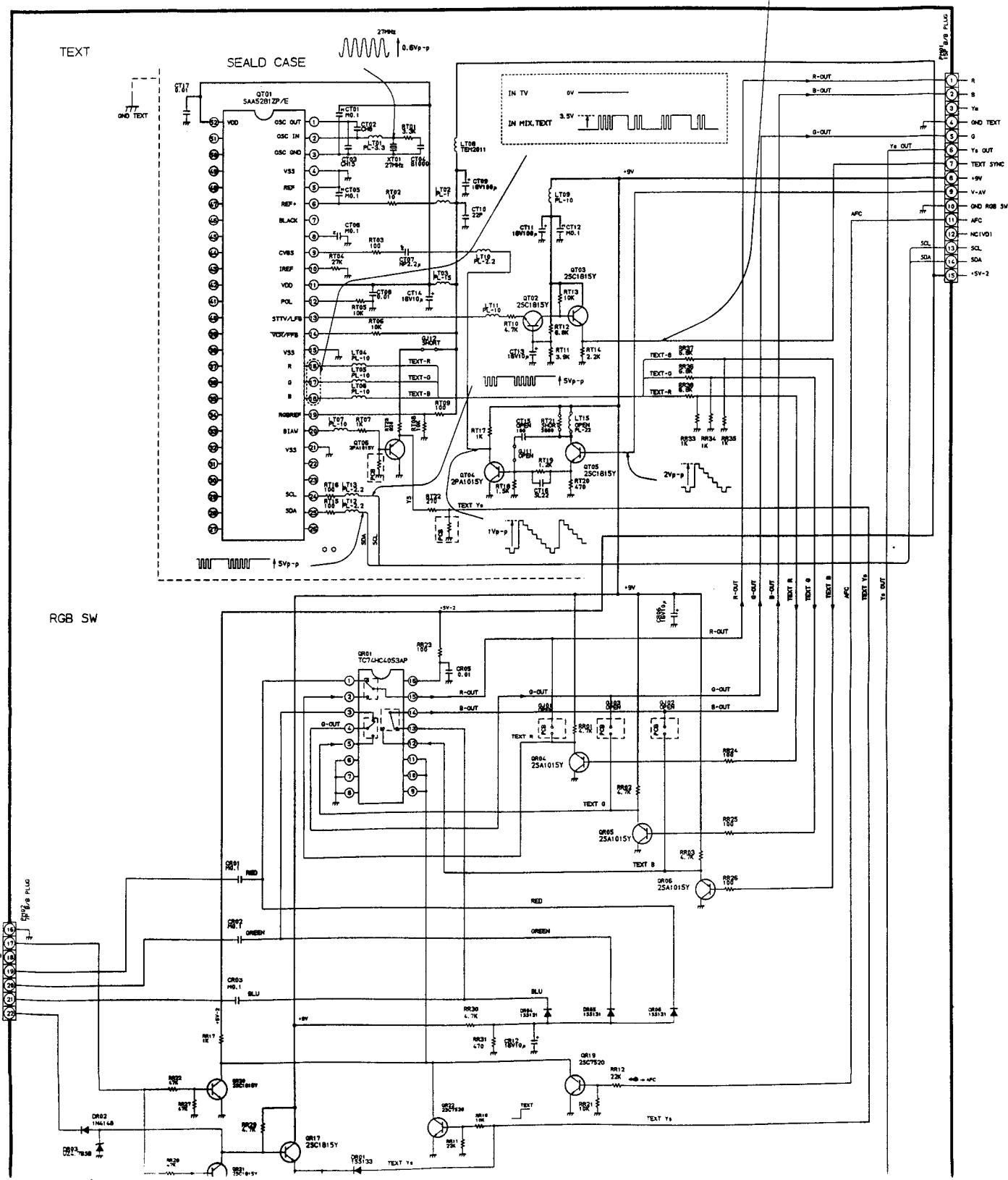


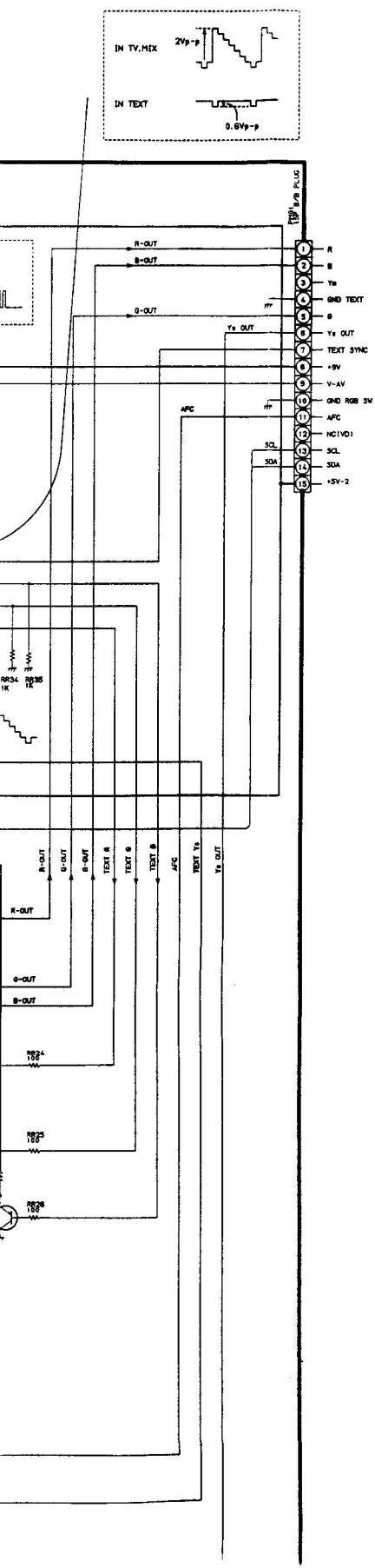
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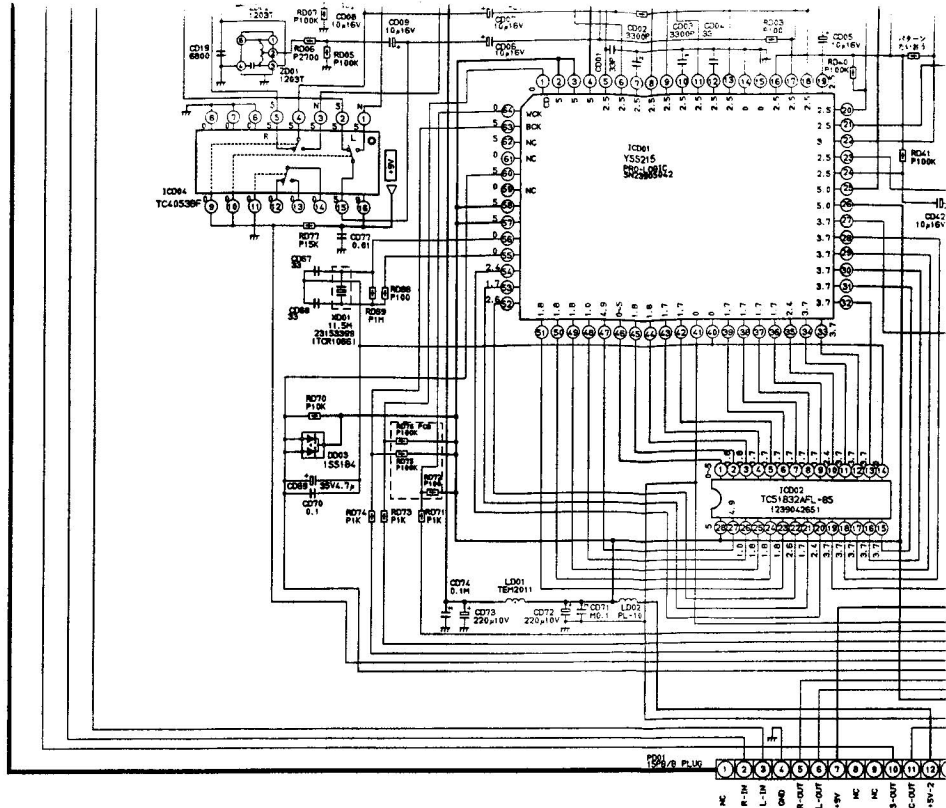


U907 TEXT/RGB SW BOARD 2857C
2857C
2857C





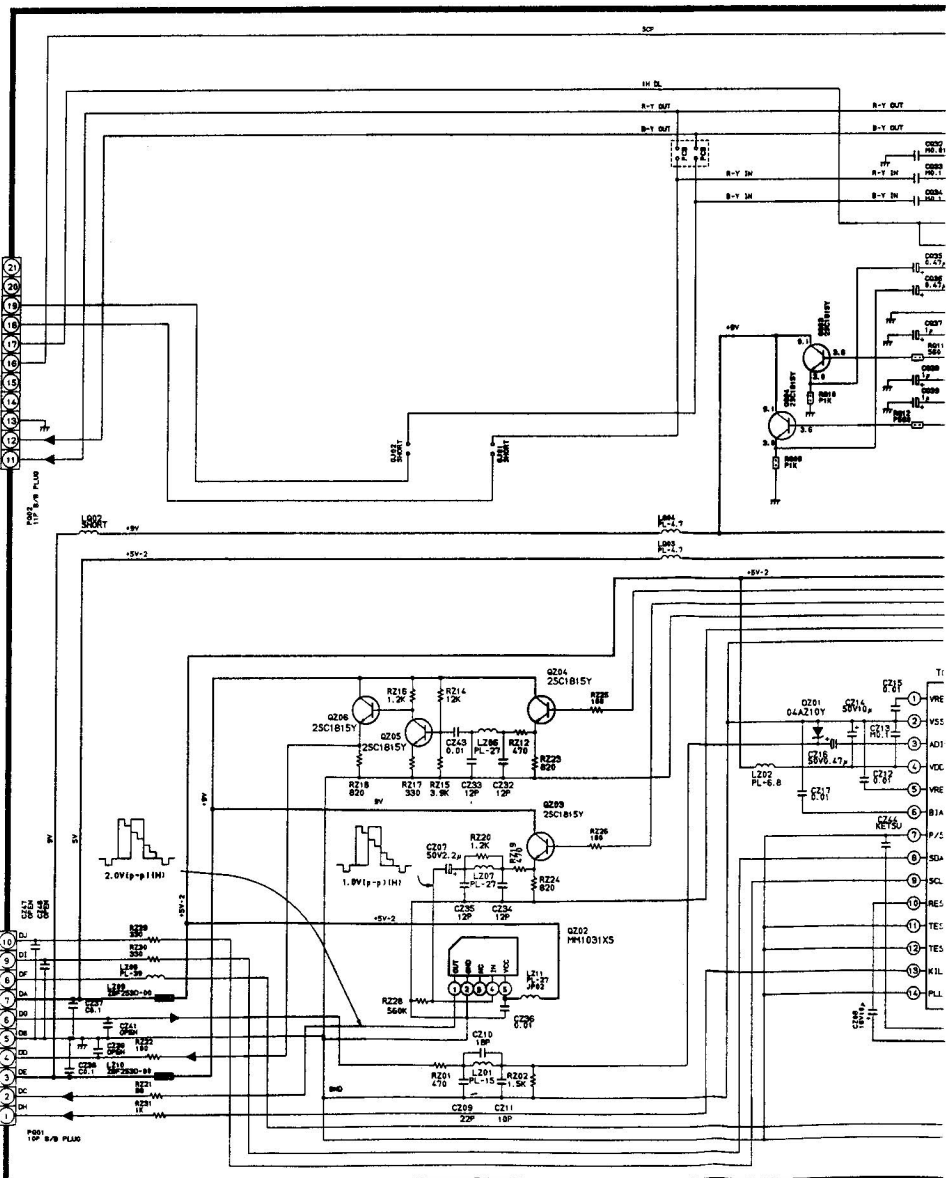




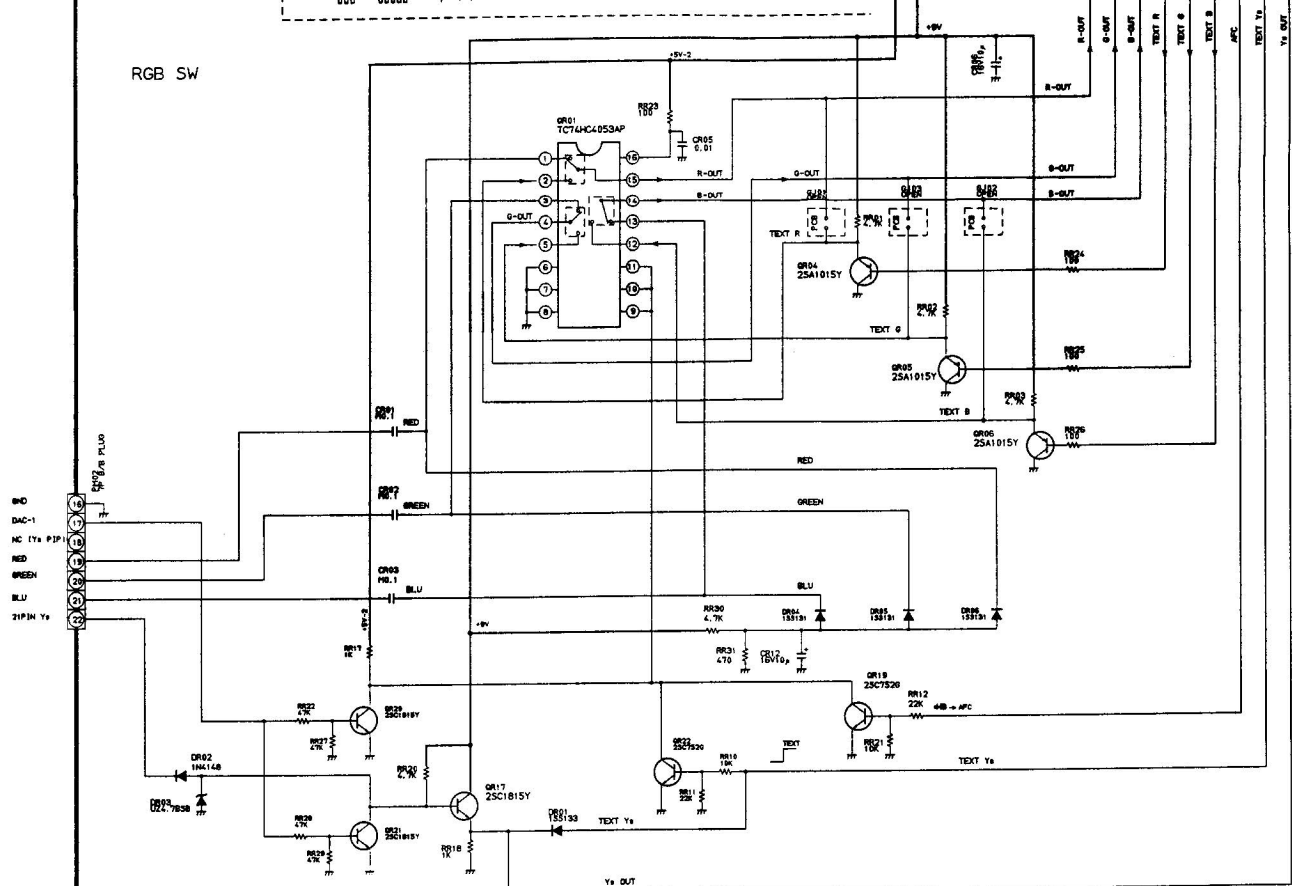
U906 COMB/1H DL BOARD 2857DB PB5661A

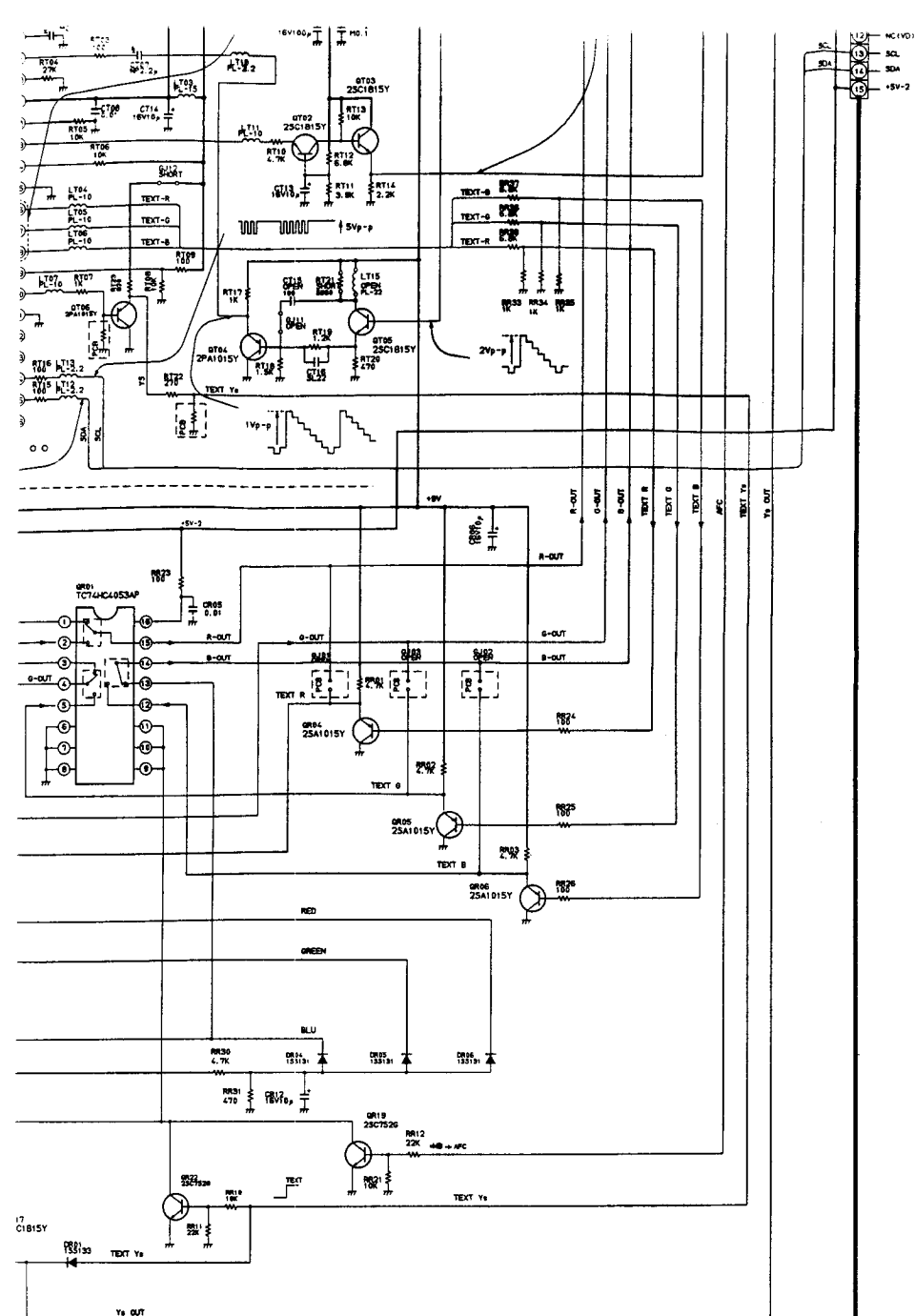
TO JUSIN

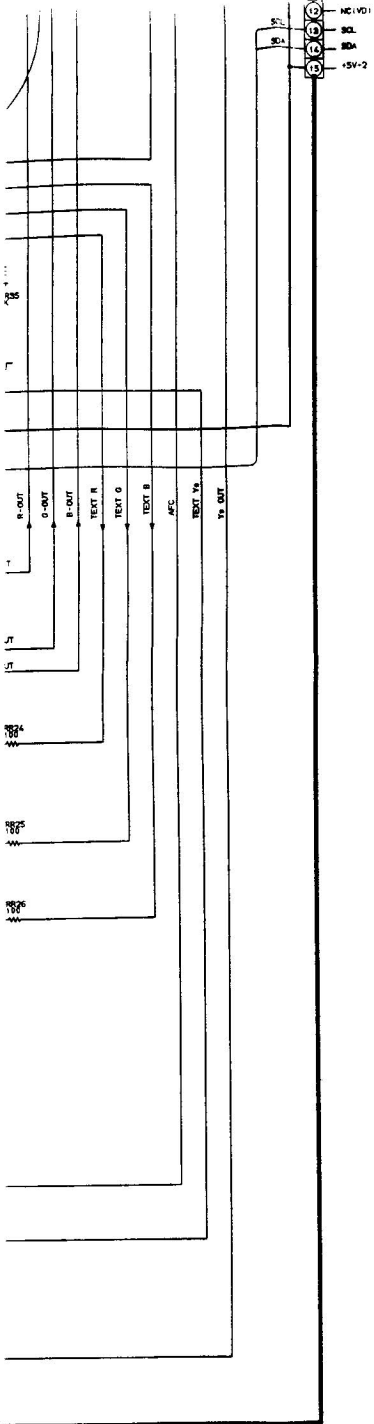
TO JUSIN



RGB SW



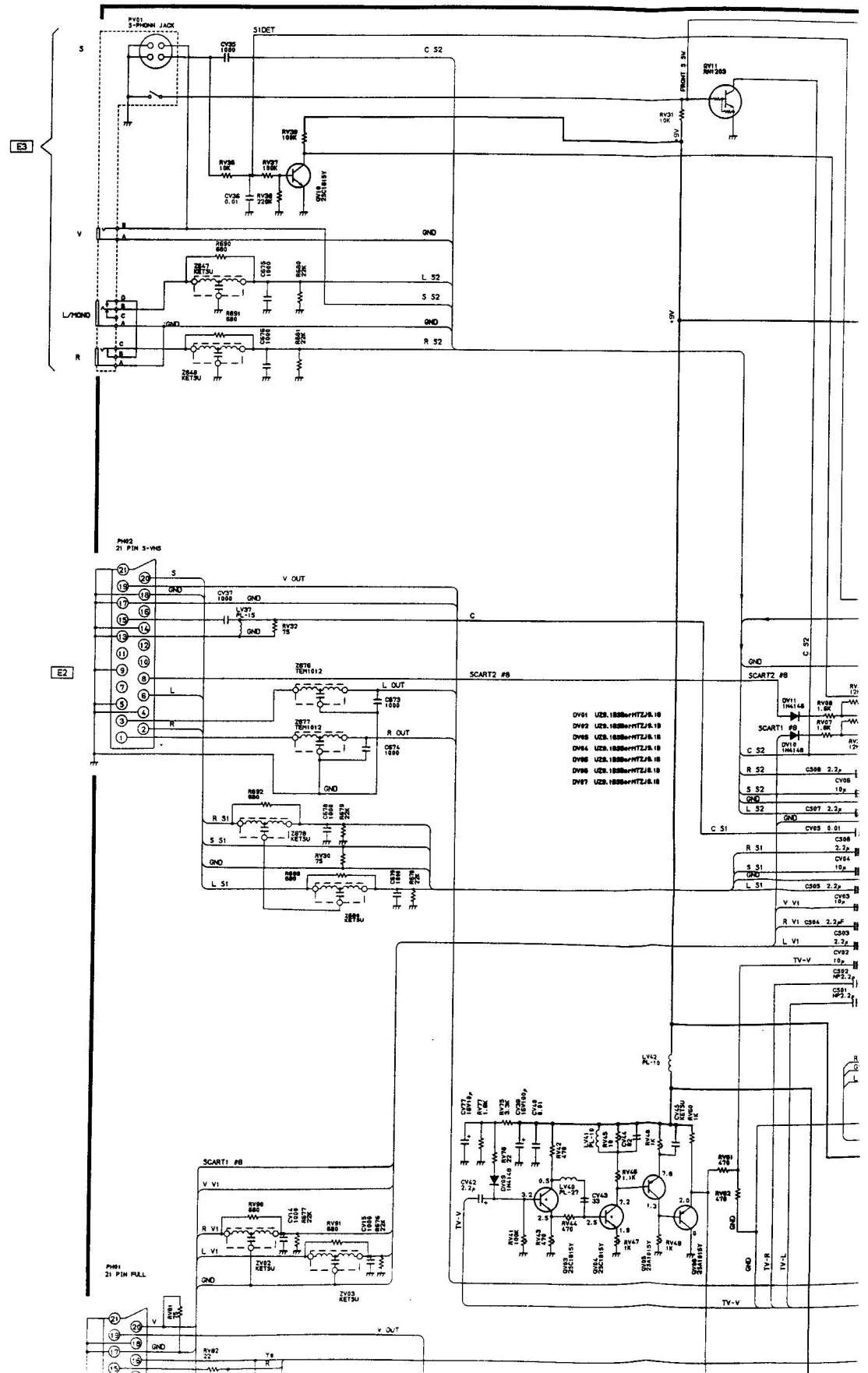




2857DB

SCHEMATIC DIAGRAM (

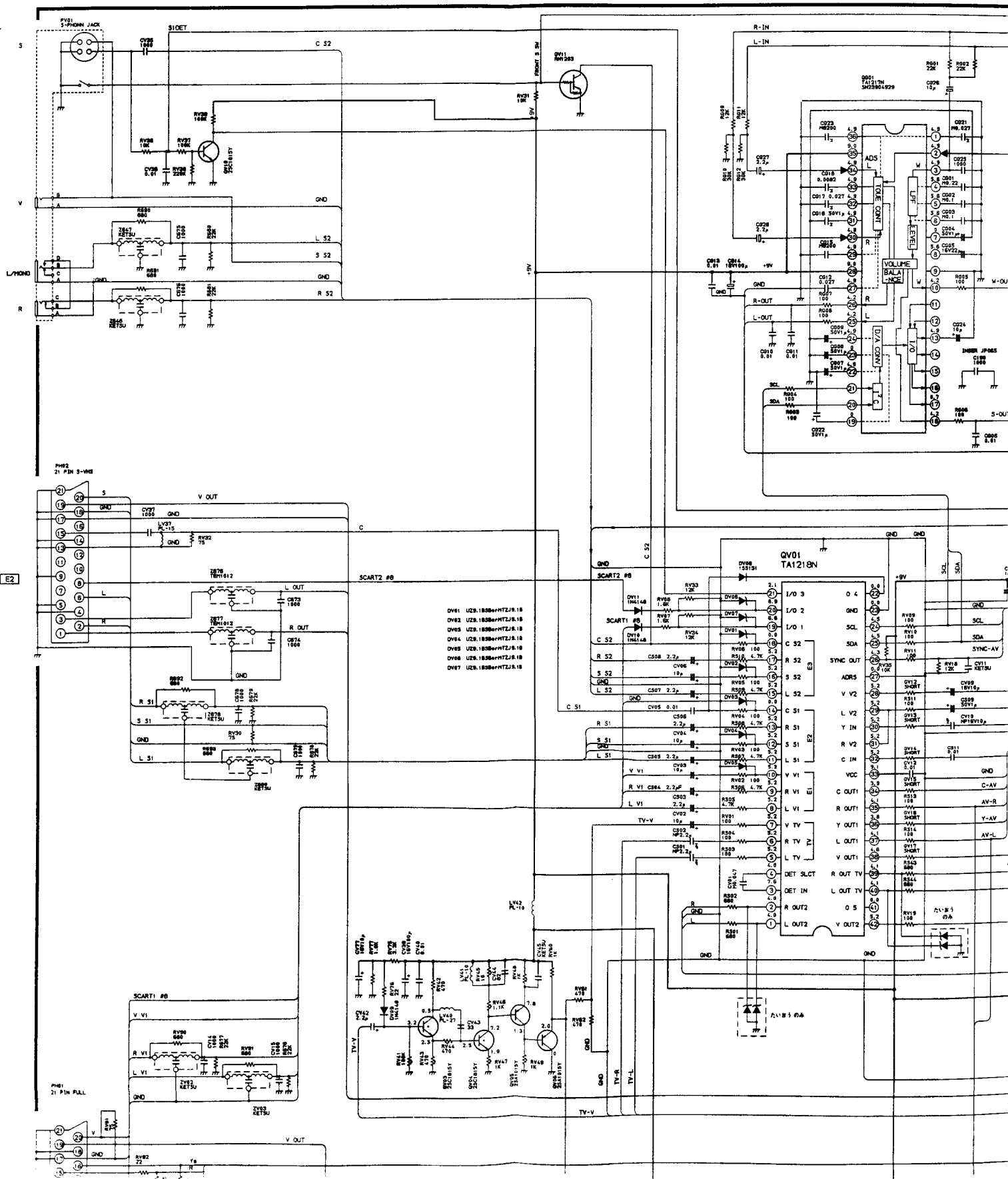
U904 BACK-T AV BOARD 2857DB PB5657X
 2857DD PB5657X
 2857DF PB5657X

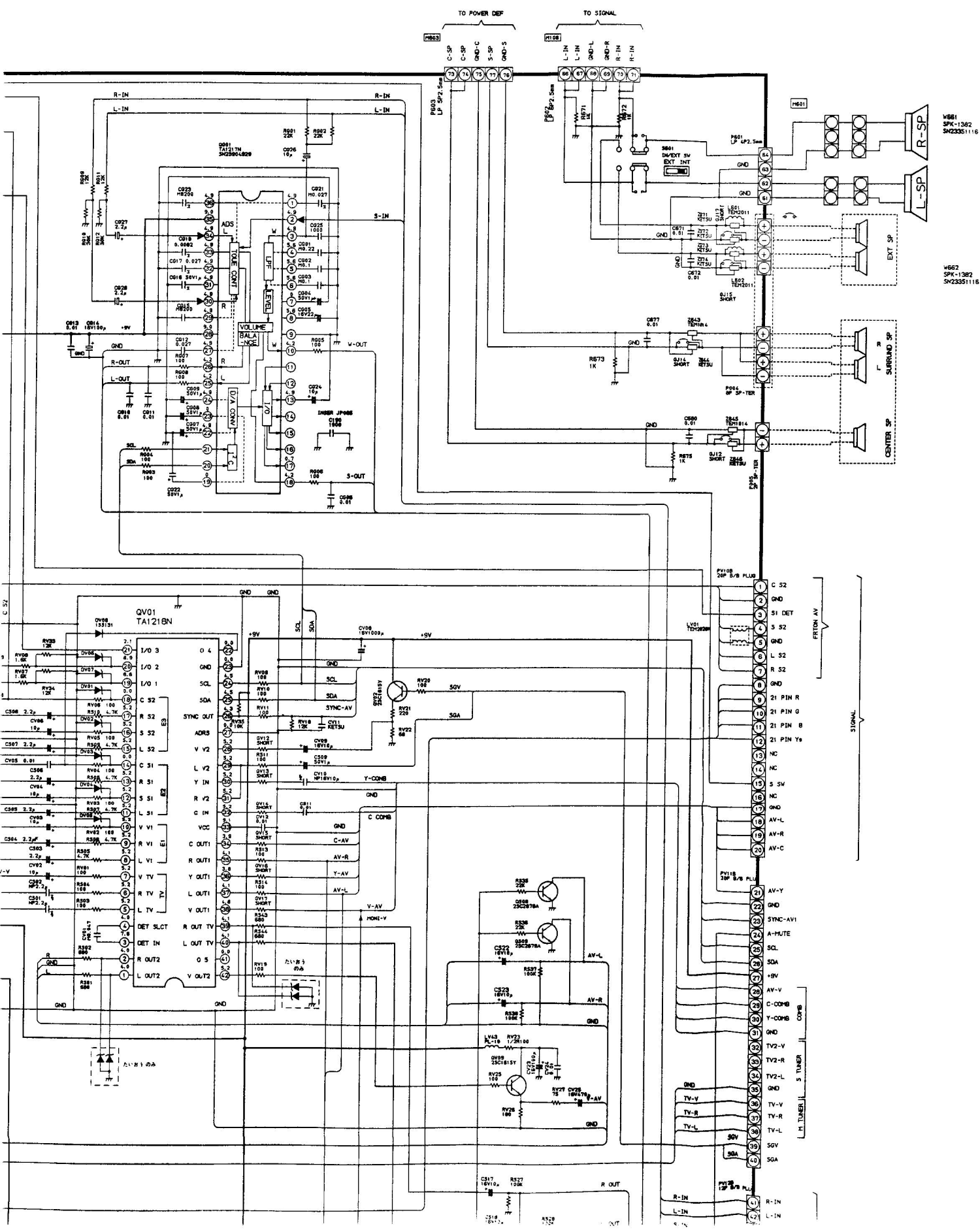


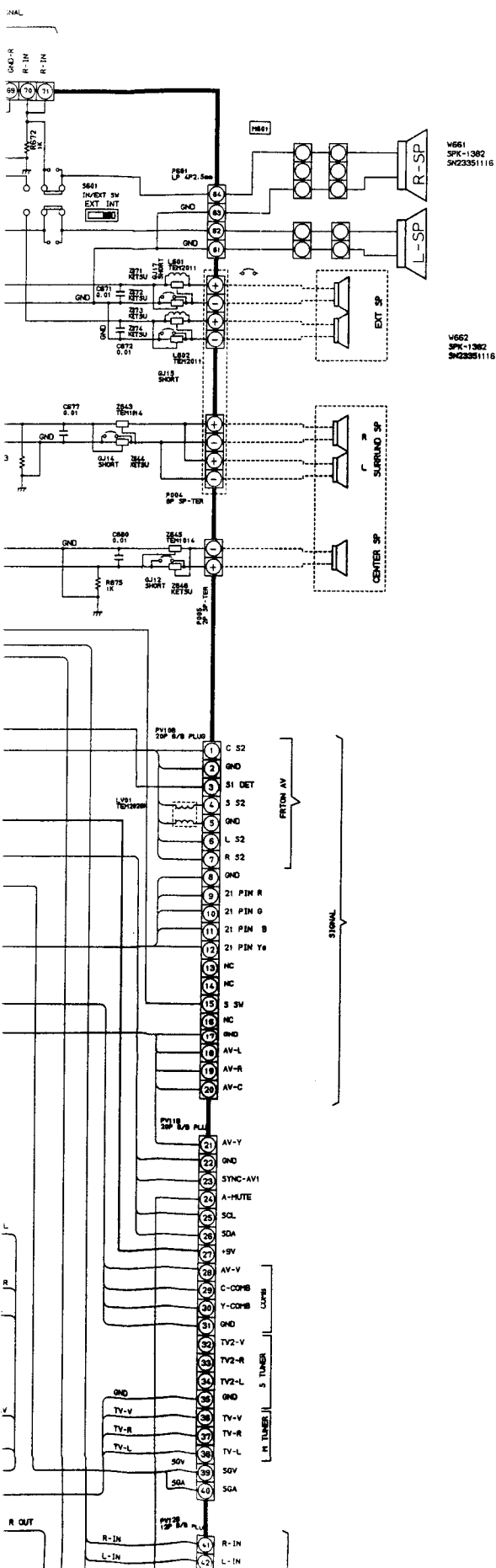
2857DB

SCHEMATIC DIAGRAM (4/4)

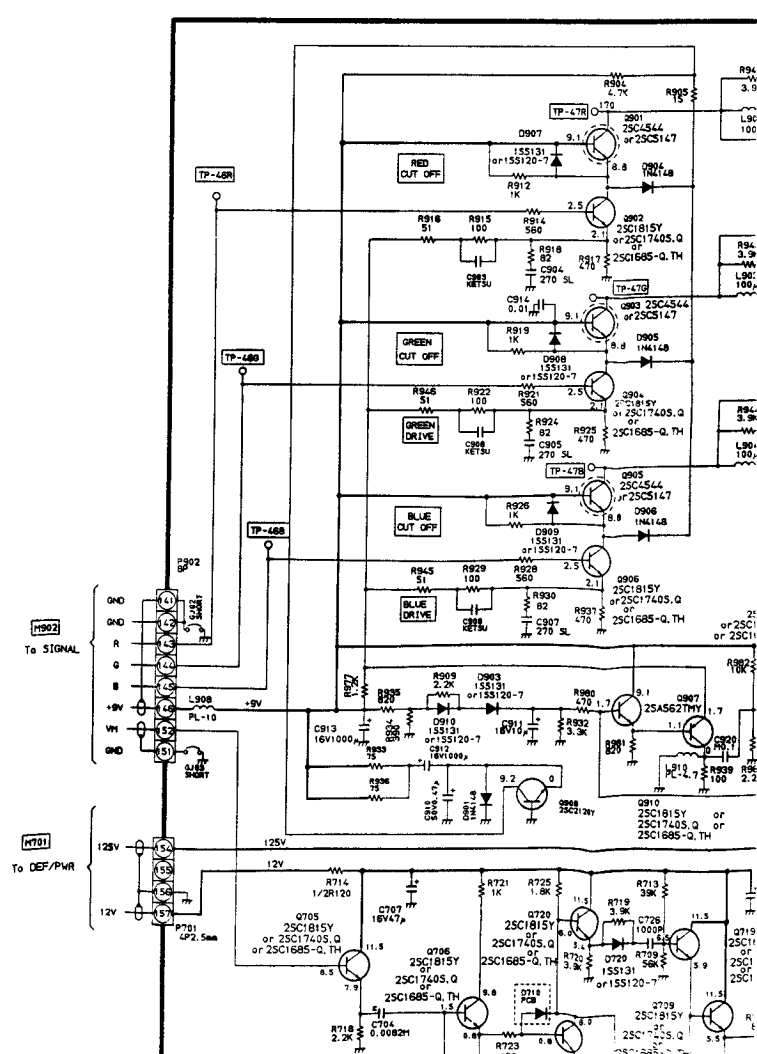
U904 BACK-T AV BOARD 2857DB PB5657X
 2857DD PB5657X
 2857DF PB5657X



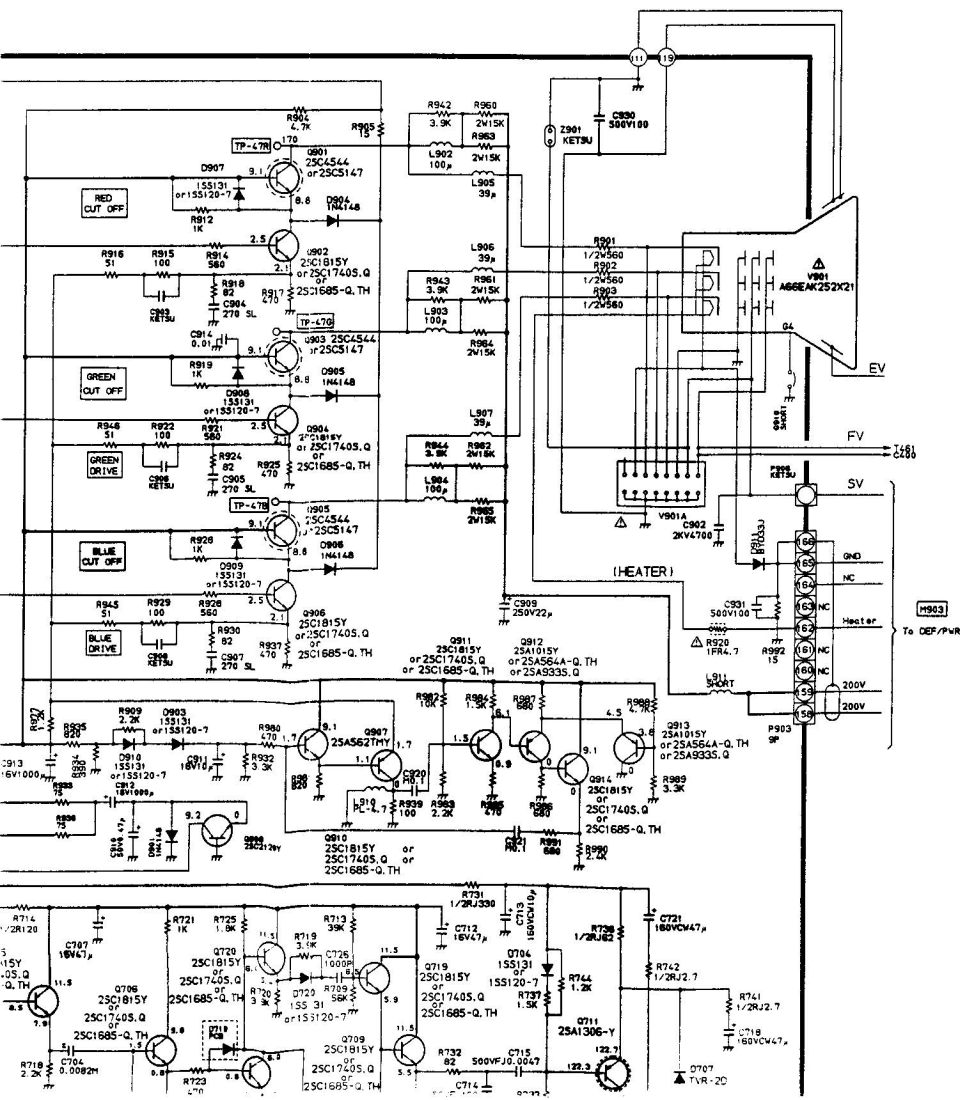


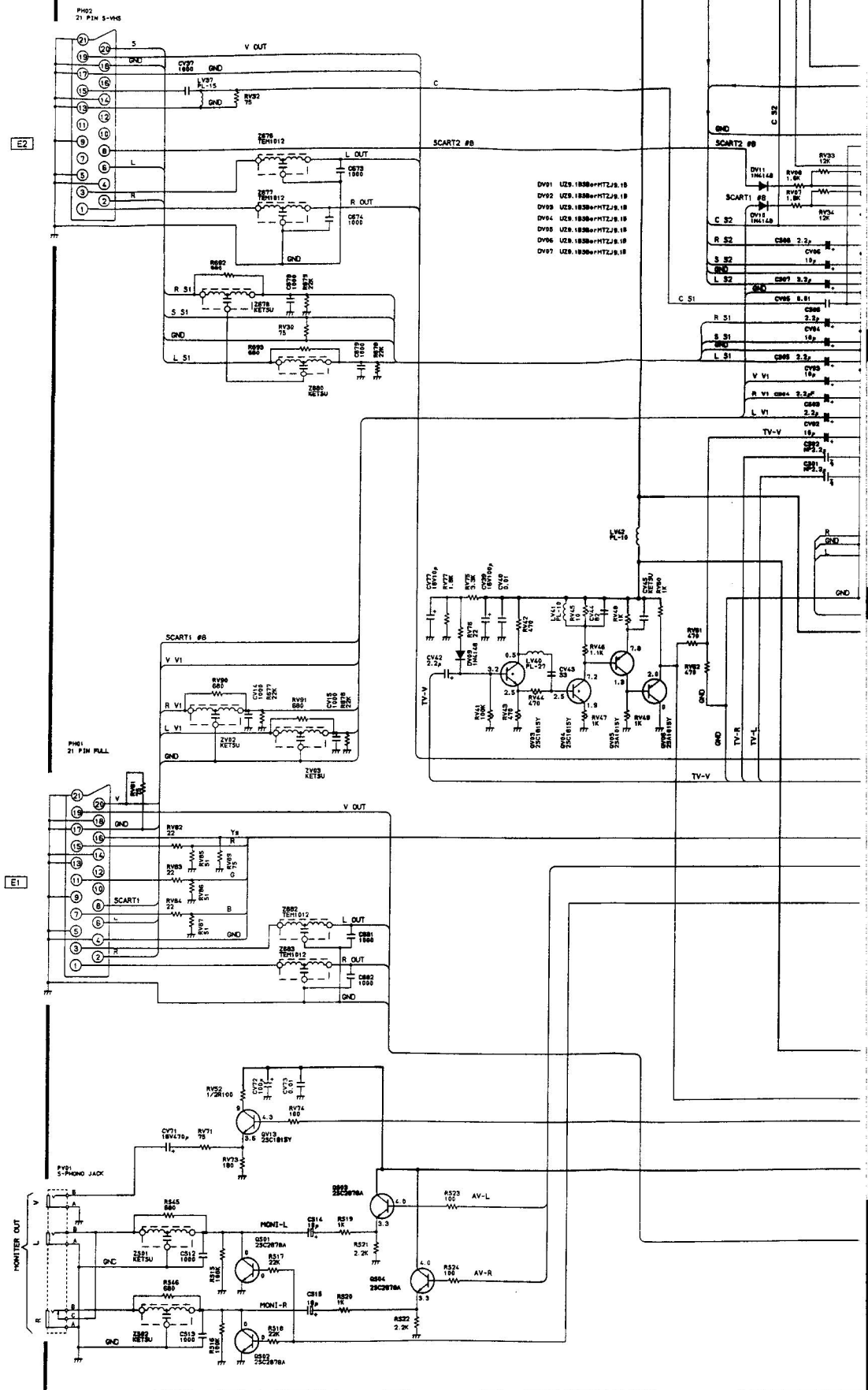


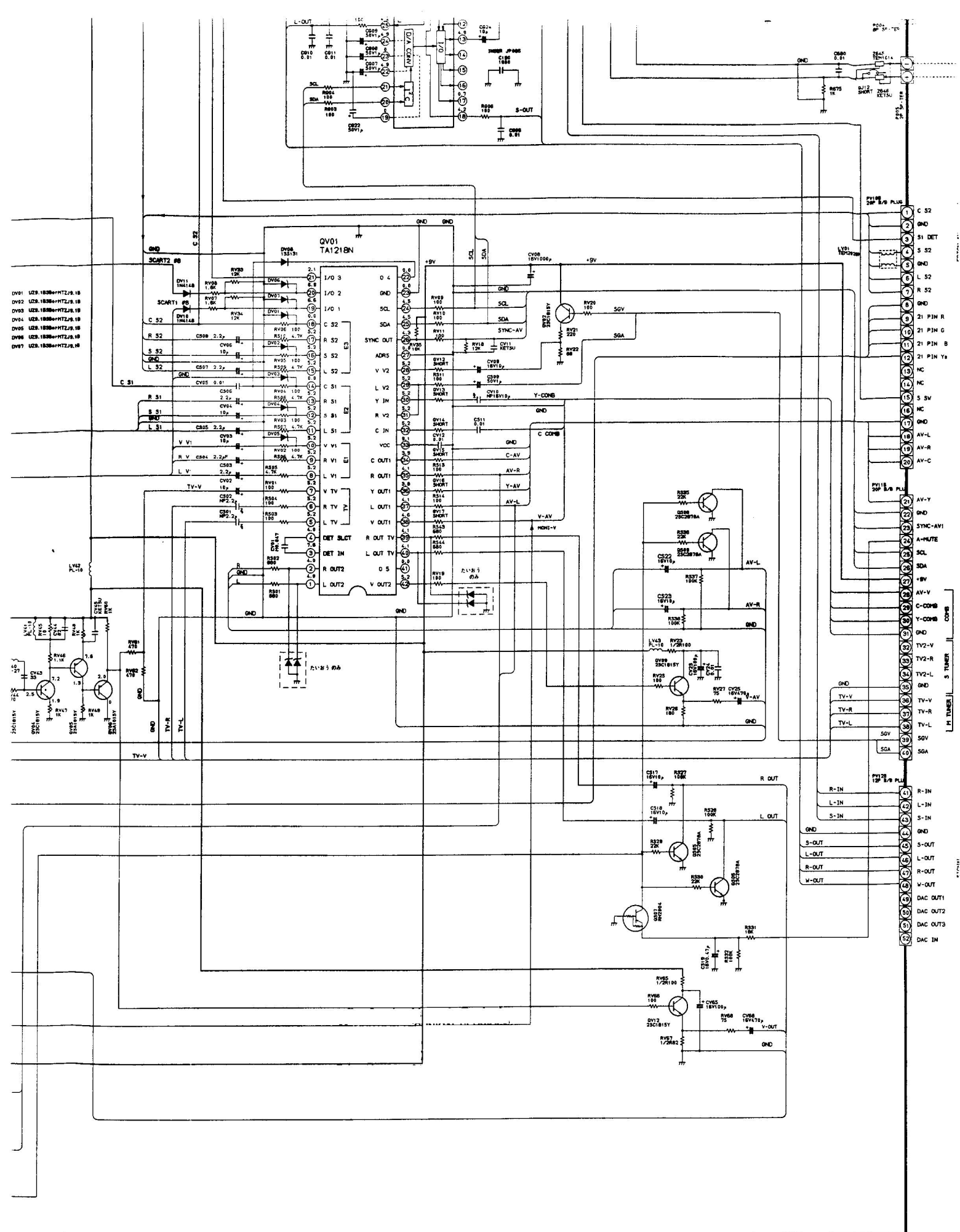
U905 CRT-D/DSM BOARD 2857
2857
2857

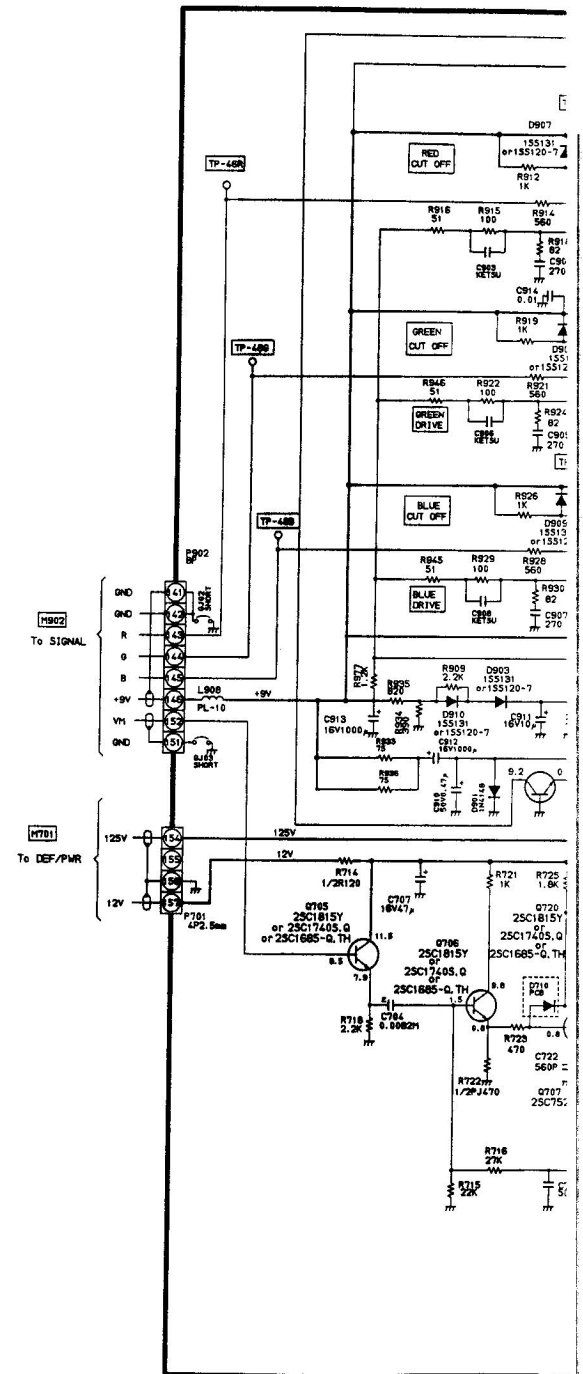
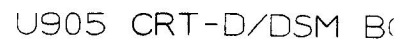


RT-D/DSM BOARD 2857DB PB5659X
 2857DD PB5659X
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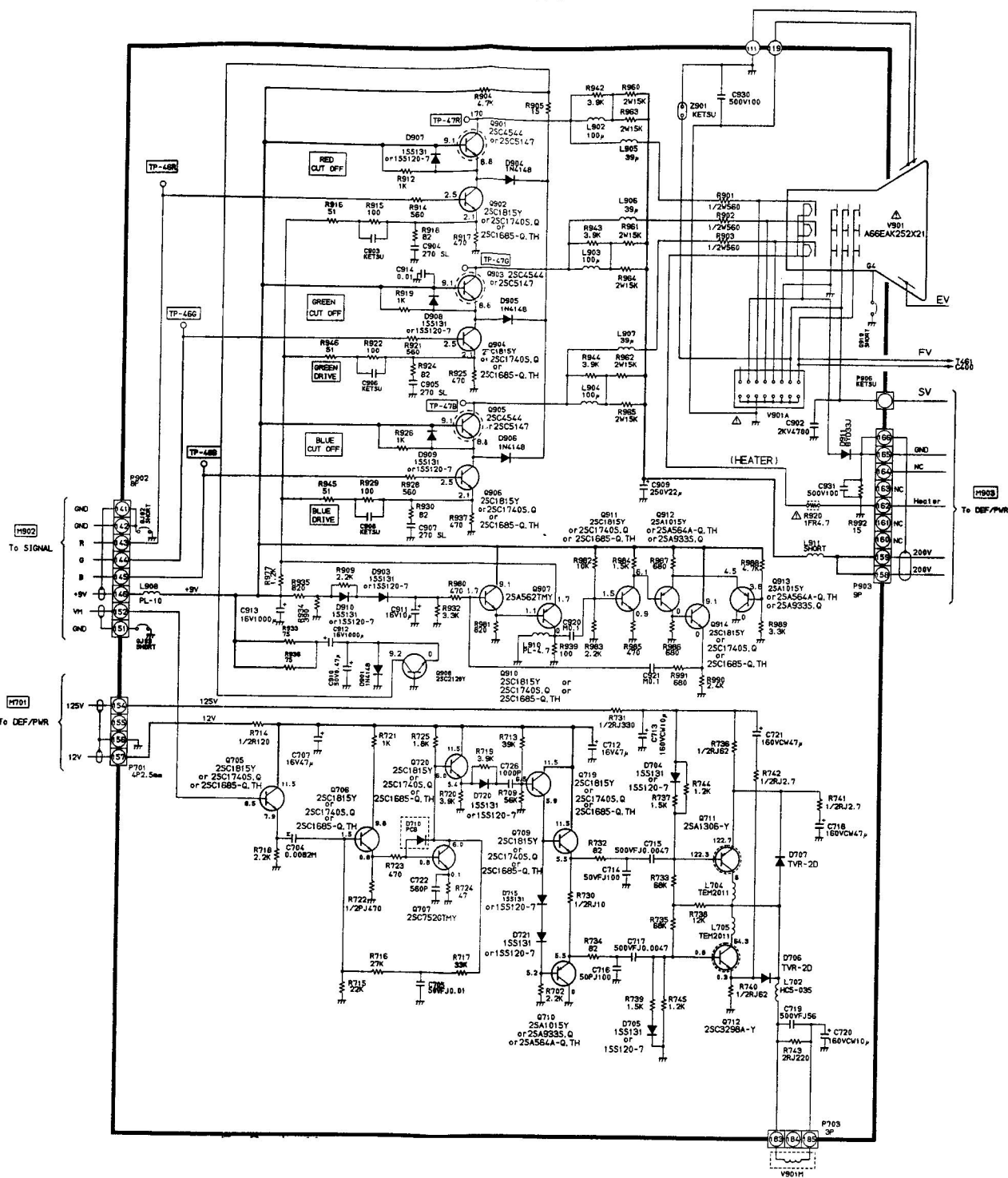








2857DB PB5659X
2857DD PB5659X
2857DF PB5659X



0/DSM BOARD

2857DB PB5659X

2857DD PB5659X

2857DF PB5659X

